



Environmental Technology Council

By Certified U.S. Mail

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July 29, 2016

Ms. Cynthia Giles, Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency (Mail Code 2201A)
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: Request For A Meeting To Discuss Inconsistent Compliance
For Thermal Desorption Units That Process Hazardous Waste

Dear Ms. Giles:

The Environmental Technology Council, the trade association for the hazardous waste management industry, requests a meeting to discuss inconsistent enforcement and compliance policies being applied by different EPA regional offices to so-called Thermal Desorption Units (TDUs) that are used to thermally destroy hazardous wastes. Due to the significance of this matter, a meeting is requested at your earliest opportunity so that we can discuss measures to better insure enforcement consistency for the hazardous waste industry.

Who we are

The Environmental Technology Council (ETC) is a national trade association whose mission is "to promote the protection of public health and the environment through the adoption of environmentally sound procedures and technologies for recycling and detoxifying industrial wastes and by-products and properly managing and disposing of wastes and waste residues." See www.etc.org. Consistent with this mission, ETC members have a substantial interest in insuring consistency on how environmental compliance requirements are applied within our industry.

Why we've contacted you

ETC understands that the Office of Enforcement and Compliance Assurance (OECA) will address pollution problems that impact American communities through vigorous civil and criminal enforcement that targets the most serious water, air and chemical hazards. As part of this mission, OECA works to advance environmental justice by protecting communities most vulnerable to pollution. Due to the human health risks and environmental justice concerns of burning hazardous wastes in TDUs without a permit under the Resource Conservation and Recovery Act (RCRA), ETC believes that OECA should be briefed on the serious matter.

Who this matter concerns

Tradebe Treatment and Recycling, LLC (“Tradebe”), located at 4343 Kennedy Avenue, East Chicago, Indiana, owns and operates two TDUs that process significant volumes of hazardous waste. Tradebe’s overall operations include hazardous waste fuel blending, lab pack depacking and bulking, tank storage and treatment, and container storage, all of which are subject to RCRA Permit USEPA ID # IND 000646943. However, the two TDUs for thermally destroying hazardous wastes are allegedly “exempted” from the company’s RCRA permit. Tradebe uses the TDUs to treat an extensive list of hazardous wastes such as “paint waste, solvent soaked rags, resins, polymers, plastics, production debris, and discarded commercial chemicals” as advertised in their own sales brochure (Attachment A hereto). As EPA is aware, the term “treatment” is broadly defined in RCRA to include “any method, technique, or process” that is designed to change “the physical, chemical, or biological character or composition of any hazardous waste.” The Tradebe TDUs are engaged in thermal destruction of a significant portion of the hazardous waste feed to those units in addition to desorbing some organic compounds for recovery. By statute and regulation, any “person owning or operating an existing facility ... for the treatment, storage, or disposal of hazardous waste” must have a permit issued under RCRA. 40 C.F.R. § 270.1(b).

Tradebe’s TDUs have a combined total maximum throughput rate of 78,000 tons of hazardous waste per year, which is comparable to a large, commercial RCRA-permitted incinerator.

Inconsistent enforcement between EPA Region 5 and other EPA regional offices

EPA Region 5 has not required Tradebe to include the TDUs within the company’s current RCRA permit and has not taken any enforcement action with respect to the ongoing thermal destruction of hazardous wastes in those units. In contrast, in 2008 EPA Region 6 pursued an enforcement action against Rineco Chemical Industries in Benton, Arkansas, for thermal destruction of hazardous wastes in a TDU without a RCRA permit. The Federal district court agreed with Region 6 and ordered Rineco to obtain a RCRA permit or cease its TDU operations. *United States v. Rineco Chemical Industries, Inc.*, 2009 WL 801608 (E.D. Ark. 2009) (Attachment B). Likewise, EPA Region 6 entered into a Consent Agreement and Final Order with US Ecology Texas, Inc. and TD*X Associates L.P. to require a RCRA permit for thermal destruction of hazardous wastes in a TDU. [https://yosemite.epa.gov/OA/RHC/EPAAdmin.nsf/Filings/77636784A15FA1CC85257E05001BBF43/\\$File/usecology2.pdf](https://yosemite.epa.gov/OA/RHC/EPAAdmin.nsf/Filings/77636784A15FA1CC85257E05001BBF43/$File/usecology2.pdf). Recently, EPA Region 6 submitted comments on a draft RCRA permit for two TDUs to be operated by Chemical Waste Management in Carlyss, Louisiana, confirming that the RCRA permit should include controls similar to a hazardous waste incinerator (Attachment C).

The positions of EPA Region 5 and EPA Region 6 with respect to RCRA permits and enforcement for TDUs that thermally destroy hazardous wastes means that human health and environmental protection depends on the region where a TDU is located, not on consistent EPA enforcement and compliance. The conflicting positions of EPA Region 5 and Region 6 also create an unlevel regulatory program for the hazardous waste industry.

Thermal destruction of hazardous waste in TDUs

There can be no doubt that the Tradebe TDUs are engaged in the thermal destruction of a significant portion of the hazardous waste feed, even if they are also engaged in some recovery of liquid organics through desorption. The fact that the TDUs are used to recover organics does not exempt the thermal destruction of hazardous wastes from RCRA requirements. Thermal destruction is demonstrated by the following:

1. A mass balance of the hazardous wastes fed to the Tradebe TDUs compared to the recovered organics, metal, and other residuals, reveals that a significant volume of waste feed is thermally disposed. The court in *U.S. v. Rineco* used this mass balance test to determine that Rineco's TDU was engaged in unregulated thermal destruction in violation of RCRA. The court used Rineco's own documentation to show that a substantial percentage of waste fed to the unit "was unaccounted for, i.e., disposed of, burned, or incinerated in the treatment process". 2009 WL 801608 at 9. Per Tradebe's own advertising brochure (Attachment A), Tradebe processes 36,000 tons of hazardous waste per year in the TDUs and recovers only 7,000 tons of scrap metal and 10,200 tons of solvent. Even accounting for an estimated 10,000 tons of other residuals, primarily water and char, only 27,000 tons of hazardous waste feed can be accounted for on a mass balance basis. That means that at least 9,000 tons of hazardous waste, or 25% of the waste feed, is thermally destroyed in the TDUs per year without a RCRA permit.
2. There are no controls on the hazardous wastes that are fed to the TDUs, and the feed is not restricted to wastes with recoverable hydrocarbons. According to Tradebe, the TDUs can accept a broad range of hazardous wastes including paint waste, rags, resins, polymers, plastics, production debris, and discarded commercial chemicals. Many other types of hazardous wastes are available on-site and no permit or other restrictions apply to the waste feed. It is essential for a RCRA-regulated thermal treatment facility to restrict the composition of the feed so that emissions of hazardous chemical compounds do not exceed prescribed emission limits. A RCRA permit is required so that appropriate feed limits can be established for the TDUs. This is particularly important because, while some of these wastes may yield organics for recovery, the remaining waste materials are thermally destroyed in the TDUs' heated rotating drums, while non-condensable gases are burned in flares that are an integral part of the disposal operation.
3. There are no operating parameter limits on temperature, oxygen, or other conditions to assure that emissions are controlled. Tradebe claims that the TDUs are operated in an "anaerobic atmosphere," but there are no permit limits or other restrictions on oxygen concentration and no public monitoring reports. EPA has stated in technical papers that oxygen levels in thermal desorption units must be maintained at less than 2 percent to limit combustion *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites, Chapter VI: Low-Temperature Thermal Desorption* (EPA 510-B-95-007). Only through the engineering review and comprehensive performance testing that are part of a RCRA permit can appropriate operating parameter limits (OPLs) be established for the TDUs to assure

continuing compliance with emission limits. Currently no permit limits or other regulatory controls address these parameters.

4. The fact that the TDUs produce a large volume of char demonstrates that RCRA-regulated thermal destruction is occurring. EPA asserted in the Rineco case, and the court agreed, that the fact that the Rineco TDU produced a residual char for disposal “indicates that the destruction of organic materials takes place” *U.S. v. Rineco*, 2009 WL 801608 at 9. Likewise, the Tradebe TDUs produce a substantial volume of char, which alone is conclusive evidence that thermal destruction of hazardous wastes is occurring. According to a state inspection report, Tradebe generates approximately 10 to 13 roll-offs of char from the TDUs per week depending upon operations. IDEM Inspection Report (Jan. 7, 2016), IDEM Doc. # 80205392. The char itself must be classified as a hazardous waste under EPA’s derived-from rule because it is generated from the treatment and disposal of listed hazardous wastes. 40 CFR §261.3(c). Therefore, the char must meet the treatment standards in 40 CFR Part 268 applicable to the hazardous wastes that are thermally destroyed in the TDUs prior to land disposal in a RCRA-permitted landfill. Based upon information and belief, Tradebe disposes of char at landfills without meeting the treatment standards and land disposal prohibitions of RCRA.
5. The TDUs vent non-condensed hazardous waste gases to flares for combustion as an integral part of their operation, classifying the entire unit as RCRA-regulated thermal treatment. A significant portion of the gas stream from processing hazardous wastes in the TDUs is not recovered, but instead is directed as a non-condensed gas to flares where it is burned. The flares are enclosed devices that use “controlled flame combustion” to destroy organics and therefore are engaged in incineration. The Tradebe TDUs are designed to intentionally drive volatile gases off the hazardous waste and then use the flares as an integral part of the process to combust those gases which are non-condensable. That is different from other units (e.g., tanks) that use flares to control gases which are incidental and not deliberately formed as a primary element of their operation. The court in *U.S. v. Rineco* found that venting of vapor/inerts to a similar TDU constituted “burning and incineration” in violation of RCRA. 2009 WL 801608 at 9. No emission limits for hazardous air pollutants, such as dioxin/furans, hydrochloric acid, mercury and other listed toxic metals apply to the Tradebe TDUs’ flare emissions. In fact, Tradebe’s Title V Permit only requires that the flares achieve a destruction and removal efficiency (DRE) of 98 percent. RCRA regulations, on the other hand, require that the incineration of hazardous wastes achieve a DRE of 99.99%. 40 CFR § 264.343(a)(1). Thus, the Tradebe TDUs may emit hazardous air pollutants at an amount more than two orders of magnitude greater than regulatory standards and a RCRA permit would allow.

Based on all the foregoing, Tradebe is engaged in the RCRA-regulated thermal destruction of hazardous wastes in the TDUs, and the land disposal of residual char that is a derived-from hazardous waste, in violation of the permitting requirements, air emission standards, and regulatory conditions of RCRA.

Tradebe's TDUs do not qualify for the "recycling process" exemption

Contrary to Tradebe's customer brochures, the TDUs do not qualify for the exemption from RCRA regulations as a "recycling process" under 40 CFR § 261.6(c)(1). First, even assuming the exemption was available for the recovery of organics, the exemption cannot extend to the aspect of the TDU operation that involves the thermal destruction of hazardous wastes. Some recovery of organics does not mean that the substantial treatment and thermal destruction of hazardous wastes in the TDUs is exempt from RCRA permit requirements.

This is exactly what the court ruled in the Rineco case. The court found that the Rineco TDU did not qualify for the recycling exemption in § 261.6(c)(1) "because substantial hazardous wastes that are treated in the [unit] are destroyed by thermal treatment and not recycled in the [unit]." 2009 WL 801608 at 8. The court cited EPA's own explanation in a regulatory preamble:

[W]e wish to clarify that materials being burned in... thermal treatment devices... are considered to be abandoned by being burned or incinerated under §261.2(a)(1)(ii), whether or not energy or material recovery also occurs.... In our view, any such burning ... is waste destruction subject to regulation either under Subpart O of Part 264 or Subpart O and P of Part 265. If energy or material recovery occurs, it is ancillary to the purpose of the unit – to destroy wastes by means of thermal treatment – and so does not alter the regulatory status of the device or the activity [2009 WL 801608 at 8, quoting 48 Fed. Reg. 14472, 14484 (1983) (internal quotes omitted)].

As described above, at least 25 percent of the hazardous waste feed to the Tradebe TDUs is disposed by thermal treatment, and "any such burning" is RCRA-regulated thermal treatment that does not qualify for the § 261.6(c)(1) exemption.

Second, a major part of Tradebe's business is the blending and processing of hazardous wastes into fuels for burning in cement kilns. Tradebe itself admits that the oil, char, and other residuals from the TDUs are directed into their fuel blending operations. For example, Tradebe's brochures states: "After processing [in the TDUs], a portion of the residual material can be beneficially used in energy recovery." Tradebe Brochure, Attachment D, p.2. However, EPA's regulations are clear that hazardous wastes are not subject to the recycling exemption but are regulated under RCRA permit requirements when "burned for energy recovery in boilers and industrial furnaces [BIFs]" 40 CFR §261.6(a)(2). Because Tradebe processes hazardous wastes in the TDUs and then uses the residuals to produce fuels that are "burned for energy recovery" in cement kilns, the exemption from RCRA permitting for recycling operations is not available.

This was another major holding in the Rineco case. The court carefully analyzed the regulatory language in § 261.6, finding that "recyclable materials, i.e., hazardous wastes burned for energy recovery in BIFs" are not subject to the recycling process exemption, "but instead are regulated under Subparts C through H of Part 266." 2009 WL 801608 at 6. Under Subpart H, "[o]wners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of Sections 264, 265, and 270 of this

regulation.” *Id.* The Subpart H regulations provide that “[t]hese standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.” *Id.* (emphasis added).

Just like Rineco, Tradebe is an intermediary fuel blender that treats hazardous wastes in the TDUs that are then blended and burned for energy recovery in BIFs. Therefore, the exemption set forth in §261.6(c)(1) for recycling processes is inapplicable to Tradebe.

As the court ruled in the Rineco case, a contrary ruling would mean:

[A]ny hazardous waste treatment unit that processed an incidental amount of recovered material that is not burned for energy recovery would qualify for the recycling exemption. Such an interpretation is contrary to the regulations and RCRA’s purpose to ensure the proper treatment, storage and disposal of hazardous waste so as to minimize the present and future threat to human health and the environment” 2009 WL 801608 at 8.

EPA Region 6 Determination Letter

The Rineco case resulted from an enforcement action taken by EPA Region 6. In addition, EPA Region 6 recently issued a letter of clarification on May 2, 2016, regarding the hazardous waste regulatory standards for TDUs installed at RCRA treatment, storage and disposal facilities (TSDFs) (Attachment E). This letter states in part:

If a TDU combusts all or a portion of the vent gas, combustion of the TDU vent gas from RCRA hazardous waste or recyclable materials [40 C.F.R. §261.6(a)(1)] is considered thermal treatment that is regulated by RCRA. The material being treated (oil-bearing hazardous waste) is already a hazardous waste. Heating hazardous wastes to a gaseous state is subject to regulation under RCRA as treatment of hazardous waste, and thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA. 54 Fed. Reg. 50968, 50973 (December 11, 1989). Thus, thermal treatment of the vent gas requires a RCRA permit.

If the vent gas is combusted in the combustion chamber of the TDU, then a permit under 40 C.F.R. Part 264, Subpart O is required, because the TDU would meet the definition of incinerator in 40 C.F.R. §260.10 (an enclosed device that uses controlled flame combustion). If, on the other hand, the vent gas is vented to and combusted in a thermal oxidizing unit (TOU), the permitting authority may be able to permit the entire unit (TDU and TOU) as a miscellaneous unit under 40 C.F.R. Part 264, Subpart X. A RCRA permit would be required even if the facility is operating as a RCRA exempt recycling activity under 40 C.F.R. §261.6(a)(3)(iv)(C). If the permitting authority decides to issue a 40 C.F.R. Part 264, Subpart X permit, the permitting authority is required to include in the

permit requirements from 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146 that are appropriate for the miscellaneous unit being permitted as required in 40 C.F.R. §264.601.

In short, the Region 6 letter clearly states that TDUs which are combusting all or a portion of the TDU vent gas are required to obtain a RCRA permit for such treatment units, and they are required to comply with the HWC MACT in addition to other standards.

Previous efforts to obtain EPA review and action

This letter is not the first attempt that we have made to prompt EPA into enacting a consistent compliance policy towards TDUs like the Tradebe units. In 2006, ETC submitted letters to the Indiana Department of Environmental Management (IDEM) and EPA Region 5 objecting to the apparent RCRA-exempt recycling status of the initial TDU at the Tradebe facility (then operated by Pollution Control Industries, Tradebe's predecessor corporation). In 2010, ETC again submitted a letter to EPA Region 5 seeking a determination on PCI's claim that the TDU was an exempt unit. During 2014, ETC learned that Tradebe was installing a second TDU and in 2015 ETC submitted adverse comments to Region 5 and IDEM on their draft air permit modification which would allow the new TDU to operate. IDEM issued a final air permit modification approval to Tradebe, ignoring ETC's comments, and Region 5 issued its decision in support of IDEM's approval. Consequently, on June 12, 2015, ETC filed a Clean Air Act petition under 40 CFR § 70.8 with Region 5, objecting to the issuance of the air permit modification to Tradebe. To date, more than a year later, EPA Region 5 has not responded to the ETC petition.

Notice of intent to file a RCRA Citizen Suit

After greater than 10 years, ETC is now running out of options to encourage Region 5 to regulate the Tradebe TDUs in a manner consistent with other hazardous waste processing TDUs (i.e., insure they are RCRA permitted and comply with the HWC MACT standards). A legal option that ETC has considered is to submit a citizen suit notice letter under RCRA, 42 U.S.C. § 6972(a), of intent to file suit against the Administrator for failure to perform her non-discretionary duties and against Tradebe for violation of the requirement to obtain a RCRA permit for treatment and disposal of hazardous wastes in its TDUs. Last year the Hoosier Environmental Council (HEC), an environmental group in Indiana, conducted the first comprehensive assessment of environmental justice in the East Chicago, Indiana, region where the Tradebe facility is located, documenting that the community has "long suffered a hugely disproportionate share of Indiana's pollution burden" *Assessment of Environmental Justice Needs In Northern Lake County Communities*, <http://www.hecweb.org/wp-content/uploads/2010/04/HEC-Assessment-of-EJ-Needs-in-Northern-Lake-County-Communities-FINAL-REPORT2.pdf>, at p. 6. If the Tradebe TDUs were required to obtain a RCRA permit, the East Chicago community would have an opportunity for their environmental justice concerns to be taken into account pursuant to EPA's published guidance on consideration of environmental justice in permitting.

In an attempt to avoid the need to pursue a RCRA citizen suit, ETC is now requesting a meeting with you and your senior staff as a final measure in the hopes of trying to initiate concrete actions that would bring Tradebe into the same permitting and regulatory compliance protocols that other commercial TDUs must meet.

In conclusion, I intend to follow-up with you to set up the requested meeting so that we can discuss actions that will resolve our concerns, while ensuring a consistent compliance policy by EPA with regards to hazardous waste TDUs.

Respectfully submitted,



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SOLIDS DISTILLATION SYSTEM (SDS)

Attachment A

About SDS Technology

TRADEBE's Solids Distillation System (SDS), is a positive step forward in sustainable waste recycling technology.

SDS offers generators an effective and cost-efficient method for recycling organic solid waste that might otherwise be disposed of.

Prior to SDS technology, most organic hazardous waste solids were incinerated in a process designed to destroy the organic content by driving off volatiles and burning excess gases.

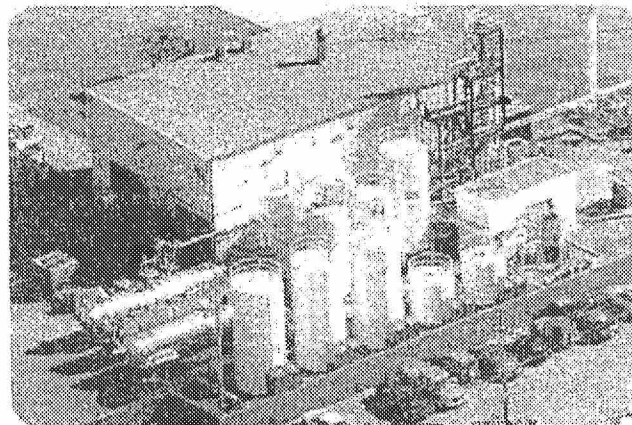
Alternatively, SDS extracts the organics from hazardous waste solids to recover a viable product.

SDS recycled products are used now in numerous industries throughout the US in place of virgin chemicals.

SDS is a multi-stage process including waste container conveyance and shredding, indirect thermal desorption, scrap metal recycling and distillation of recovered organic liquids.

Wastes suitable for SDS include:

- Paints, Resins, Polymers
- Solvent-soaked bags and other
- Organic liquids



TRADEBE's SDS operations in East Chicago, IN



TRADEBE introduced the original SDS technology in 2004 to address the growing need for recycling of hazardous wastes.

Due to growing demands of the industrial waste market, TRADEBE designed and built a second SDS unit during 2014-2015. This additional unit is SDS².

SDS² enhanced technology, with new safety standards, offers the same environmental benefits as the original SDS unit; with twice the capacity to produce a quality reclaimed product.



Contact Details:

Phone: (800) 388-7242 Nationwide
(888) 276-0887 Northeast & 24-hour Emergency Response

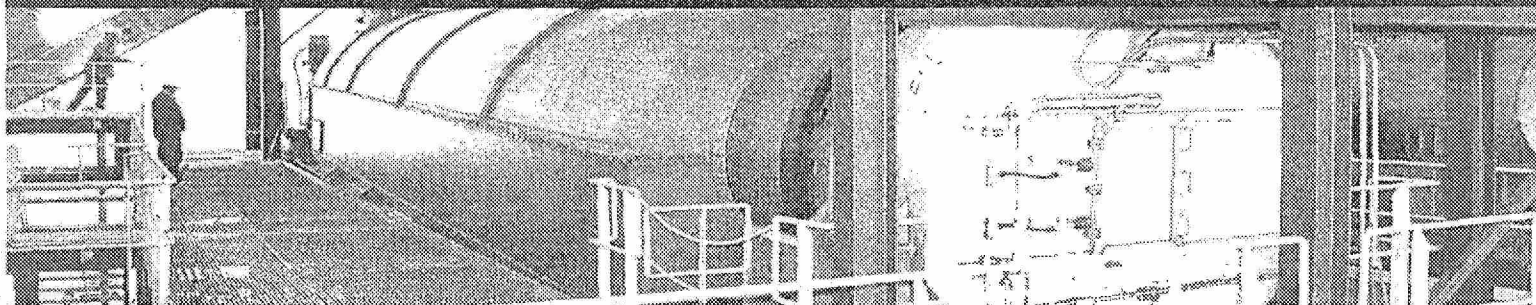
Email: us.cs@tradebe.com Web: www.tradebeusa.com



TRADEBE

Sustainability at Work

SDS² - Sustainable Waste Recycling



SDS² Benefits

True Recycling Technology

The hazardous waste processed through SDS is recycled - receiving the waste management handling code H020, Solvents Recovery (distillation, extraction); and may be eligible for recycling credits with state regulatory agencies.

Versatility

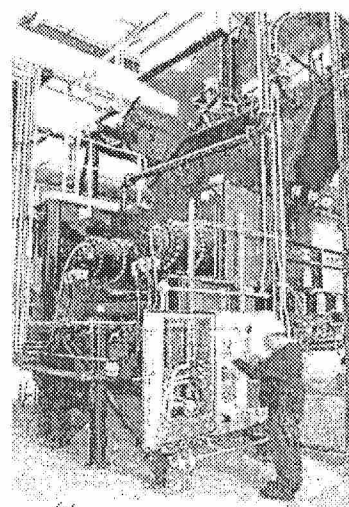
Waste can be received in various size containers from small cans to cubic yard boxes. Metal, plastic and fiber drums are processed with equal efficiency, eliminating costly and potentially unsafe handling and repackaging on site at generator locations.

Reliability

With the addition of the SDS² unit, the SDS total production capacity has increased from 12,000 tons per year to 36,000 tons per year.

SDS² Facts

- ✓ SDS promotes recycling, reclamation and reuse.
- ✓ SDS reclaims valuable constituents found in solid hazardous waste and reduces the demand for virgin chemicals.
- ✓ SDS conserves energy while keeping waste out of the environment.

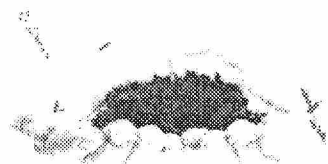


SDS Annual Stats

Scrap Metal Reclaimed : 7,000+ Tons

Solvents Recycled for Reuse : 2,750,000+ Gals

SDS Haz Waste Received & Processed : 36,000+ Tons



Scan to Watch SDS Now >



How are we doing?

Please visit us online to take our client satisfaction survey:
www.tradebeusa.com/survey



TRADEBE

Sustainability at Work

2009 WL 801608

Only the Westlaw citation is currently available.
United States District Court,
E.D. Arkansas,
Western Division.

UNITED STATES of America, Plaintiff,
v.
RINECO CHEMICAL
INDUSTRIES, INC., Defendant.

No. 4:07cv001189 SWW.

March 4, 2009.

West KeySummary

1 Environmental Law

Permits, Licenses, and Approvals

Hazardous waste facility through its activities in recycling metals that contained hazardous waste materials was not eligible for the recycling process exemption and the facility was, therefore, operating in violation of the Resource Conservation and Recovery Act ("RCRA") by its failure to obtain the required permit. The facility argued that because the material it recycled was metal and the metal was never burned for energy recovery that the regulation did not apply. However, a substantial percentage of oil and char resulting from the metal reclamation process was blended into hazardous waste derived fuel ("HWDF") and sold to boiler and industrial furnaces ("BIFs") where it was burned for energy recovery. Thus, the facility was considered an intermediary fuel blender that was subject to the permit requirements of the RCRA. Solid Waste Disposal Act, § 3005(a), 42 U.S.C.A. § 6925(a); APCEC Regulation No. 23, §§ 261.6 (a) and (c), 270.1.

Cases that cite this headnote

Attorneys and Law Firms

Richard Gladstein, Ronald J. Tenpas, Anita M. Scott, U.S. Department of Justice, Environmental Enforcement, Washington, DC, Terry Sykes, U.S. Environmental Protection Agency, Dallas, TX, for Plaintiff.

Heather M. Corken, Jeffrey D. Palmer, Fulbright & Jaworski, Houston, TX, Kevin A. Crass, Friday, Eldredge & Clark, LLP, Little Rock, AR, for Defendant.

MEMORANDUM AND ORDER

SUSAN WEBBER WRIGHT, District Judge.

*1 The United States of America brings this civil action against Rineco Chemical Industries, Inc. ("Rineco") under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901 *et seq.* The United States seeks injunctive relief and civil penalties against Rineco for violations of RCRA Sections 3005(a) and 3010, 42 U.S.C. §§ 6925(a) and 6930, and Arkansas Pollution Control and Ecology Commission ("APCEC") Regulation No. 23, which incorporates federal regulations approved by the Environmental Protection Agency ("EPA") pursuant to RCRA that are part of the federally-enforceable State hazardous waste program relating to the generation, transportation, treatment, storage, handling, and disposal of hazardous waste.

Now before the Court are cross-motions of the parties for summary judgment [doc. # 's 13, 40] to which responses and replies have been filed. The Court held a hearing on these motions at the request of Rineco on September 4, 2008, and the matter is now ripe for decision. For the reasons that follow, the Court grants the United States' motion for summary judgment [doc. # 40] and denies Rineco's motion for summary judgment [doc. # 13].¹

I.

A.

RCRA is a comprehensive environmental statute that governs the treatment, storage, and disposal of solid waste. *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 483, 116 S.Ct. 1251, 134 L.Ed.2d 121 (1996) (citation omitted).

RCRA's primary purpose is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated "so as to minimize the present and future threat to human health and the environment." *Id.* (quoting 42 U.S.C. § 6902(b)).

RCRA's Subtitle C, 42 U.S.C. §§ 6921 *et seq.*, establishes a "cradle-to-grave" regulatory system for the treatment, storage and disposal of hazardous wastes. *Cement Kiln Recycling Coalition v. E.P.A.*, 493 F.3d 207, 211 (C.A.D.C.2007) (citations and internal quotation marks omitted). This system operates through a combination of national standards established by EPA regulations, and a permit program in which permitting authorities—either EPA or states that have hazardous waste programs authorized by EPA—apply those national standards to particular facilities. *Id.*

Permits are generally required under RCRA for any facility that engages in the treatment, storage, or disposal of hazardous waste. *United States v. Manning*, 434 F.Supp.2d 988, 998 (E.D.Wash.2006). Section 3005(a) of RCRA, 42 U.S.C. § 6925, establishes a case-by-case permitting process. *Cement Kiln Recycling Coalition*, 493 F.3d at 211-12. Section 3005(a) directs EPA to promulgate regulations requiring each person owning or operating an existing facility that engages in the treatment, storage, or disposal of hazardous waste, or planning to construct a new facility that engages in the treatment, storage, or disposal of hazardous waste to have a permit pursuant to this section. *Id.* at 212 (quoting 42 U.S.C. § 6925(a)). Pursuant to Section 3005(a), EPA promulgated regulation 40 C.F.R. § 270.1(b), which provides that "[s]ix months after the initial promulgation of the part 261 regulations [Identification and Listing of Hazardous Waste], treatment, storage, or disposal of hazardous waste by any person who has not applied for or received a RCRA permit is prohibited." *See also United States v. Heuer*, 4 F.3d 723, 730 (9th Cir.1993) ("It is fundamental that an entity which performs a hazardous waste activity for which a permit is required under RCRA may not legally perform that activity unless it has a permit for the relevant activity").

*2 As indicated previously, pursuant to RCRA subsection 3006(b), EPA may authorize a state to administer and enforce its own hazardous waste program, so long as the state program is equivalent to and consistent

with EPA's program and provides adequate compliance and enforcement measures. 42 U.S.C. § 6926(b). When a state obtains such authorization, the state hazardous waste program operates "in lieu" of the federal program. *Id.*

The State of Arkansas received final authorization to enforce its hazardous waste program on January 25, 1985. 40 C.F.R. § 272.201(a).² The Arkansas Department of Environmental Quality ("ADEQ") is the state agency primarily responsible for carrying out this authority in the State of Arkansas.³ During the time Arkansas has been authorized to administer the RCRA hazardous waste program, facilities in that state have been regulated under the provisions of APCEC Regulation No. 23, which has adopted and incorporated verbatim from the federal RCRA regulations.⁴

Despite having authorized a state to act, EPA frequently files its own enforcement actions against suspected environmental violators, even after the commencement of a state-initiated enforcement action (a process known as overfiling). *Harmon Indus., Inc. v. Browner*, 191 F.3d 894, 898 (8th Cir.1999).⁵ Before initiating any such action, however, RCRA requires that EPA give the authorized state prior notice. RCRA Section 3008(a)(2), 42 U.S.C. § 6928(a)(2).

B.

Rineco owns and operates a facility in Benton, Arkansas that is engaged in the generation, treatment, and storage of hazardous waste. Rineco is the largest single-site hazardous waste fuel blending facility in the United States and receives more than 400 different types of listed and characteristic solid phase and liquid phase hazardous wastes at its facility from a large number of generators of hazardous waste.⁶

Rineco applied for and obtained a permit to operate a hazardous waste management facility at its Benton facility, RCRA Permit No. 28H-M001. Located at this facility is a Thermal Metal Wash Recycling Unit ("TMW"). The TMW is protected by Rineco Patent No. 7,341,155 B2 ("Patent"), which "relates generally to waste processing, and more particularly to systems and methods

for processing heterogeneous waste materials." As noted in the Patent,

[i]ndustry produces large amounts of waste that must be processed and disposed of by waste operators. Most of this waste is heterogeneous waste, which includes liquids and solids, which is friable and non-friable, which melts at various temperatures, has various solidification temperatures, low auto-ignition temperatures, and high vapor pressure. The waste material also includes ferrous and non-ferrous metals in a wide range of sizes. This waste is often categorized by applicable environmental regulations as "hazardous waste" because of its flammable, corrosive, or toxic nature. Thus, the disposal of such waste is heavily regulated by environmental regulations.

*3 There are inefficiencies associated with currently-available processes for disposing of industrial waste. Thus, a heretofore unaddressed need exists in the industry for systems and methods of processing waste materials.

The original TMW began operation in June 2003 and ceased operation in July 2004. The current TMW commenced operation in March 2005. The operation of both the original and the new TMW are similar, the main difference being, states Rineco, that the external heat source for the original TMW was natural gas while the external heat source for the new TMW is electricity and circulating hot oil.

The operation of the TMW, which does not have a RCRA permit, is at the center of the United States' claims in this action. The United States claims the primary purpose of the TMW is to convert a chemical soup of hazardous waste streams into hazardous waste derived fuel ("HWDF") for sale to boiler and industrial furnaces ("BIFs"), an activity it claims requires a RCRA permit. Rineco, however, claims the TMW is designed to recycle metal from hazardous and non-hazardous materials, an activity it claims is exempt from regulation and does not require a RCRA permit.

Prior to constructing the TMW at its facility, Rineco inquired of ADEQ concerning the TMW's permitting requirements. By letter dated January 10, 2003, ADEQ informed Rineco that it had made a regulatory determination regarding the TMW based on the following assumptions:

- The unit's intended purpose is to recycle metal contaminated with hazardous waste and recover scrap metal from Rineco's waste stream.
- No scrap metal from this unit will be blended into Rineco's fuel or otherwise disposed. The scrap metal will be recycled.
- The waste entering the auger contains metal contaminated with hazardous waste.
- The hazardous waste/constituents leaving the process will be handled properly as hazardous waste.
- The auger used in the process does not grind the hazardous waste entering the system; the auger only moves the waste stream.
- This unit is not intended to decontaminate containers.

ADEQ stated that "[b]ased on these assumptions, the processing unit does not require a permit, at this time" but that "the hopper may be considered a storage unit requiring a permit if the waste stream remains in the hopper for any period of time." *Id.* ADEQ went on to state that "[t]his determination is based on information submitted by Rineco for this specific unit for a specific use; the exemption does not apply to a different unit or may not apply if this unit is not utilized as intended, and in accordance with the above assumptions." *Id.*

On February 21, 2003, ADEQ sent a letter to Rineco clarifying at the request of Rineco its position on "scrap metal contaminated with hazardous waste." ADEQ stated that scrap metal, in and of itself, is exempt from hazardous waste regulation. However, ADEQ also stated "when scrap metal is mixed with non-scrap metal material (*i.e.* listed or characteristic hazardous waste), the mixture would not be considered a scrap metal and the entire mixture would be subject to regulation."

*4 By letter dated July 20, 2004, ADEQ informed Rineco that it had reason to believe that the TMW was

not being operated in a manner that conforms to a regulatory based exclusion from hazardous waste management permitting. Based on the information gathered during our investigation and observations we find that the material being processed in the unit is a mixture of hazardous waste and shredded metal.

Therefore, the entire mixture is a hazardous waste. This unit is therefore subject to permitting as a hazardous waste management unit.

This letter shall serve as notice to Rineco that the introduction of hazardous waste to the [TMW] must cease immediately. Operation of the [TMW] that does not strictly conform to the January 10, 2003 and February 21, 2003 letters must be suspended until such time as this issue is resolved.

On July 30, 2004, after meeting with Rineco, Marcus Devine ("Devine"), then-Director of ADEQ, wrote to the company stating that

[t]his letter affirms that the regulatory interpretation provided to Rineco in ADEQ's letters dated January 10 and February 21, 2003, reflect our current position on the issue. Our position, in brief, is that the TMW does not require a Hazardous Waste Management permit provided it is operated in the manner and for the specific purpose that Rineco described in their request for confirmation of this determination. Of course, the assumptions ADEQ stated in the January 10, 2003, letter and further clarified in the February 21, 2003, letter must remain valid, otherwise ADEQ may choose to revisit its position on the regulatory status of the unit.

On January 13, 2005, ADEQ sent a letter to Rineco stating that ADEQ had been informed that the TMW had been removed and, if Rineco had constructed a new TMW, ADEQ had to be officially notified to determine the regulatory status of the new unit. On February 2, 2005, Rineco confirmed that it had revised the TMW and expected the new TMW to be in full production shortly.

On February 9, 2005, Devine wrote to Rineco indicating that he was "disturbed to learn that Rineco has not informed the [ADEQ] staff of the details of this new/ revised process," and that "[t]he regulatory determination by this agency in January 2003 was strictly limited to the unit addressed by the determination letter and limited in

scope based on the nature of the operation as described at the time the determination was made." ADEQ required Rineco to provide a variety of information describing the operation of the revised unit in order to make a regulatory determination.

On March 22-24, 2005, EPA conducted an inspection of the Rineco facility. The purpose of this inspection was to evaluate Rineco's systems and methods for processing waste materials and facility compliance with RCRA. On June 28, 2005, EPA conducted a followup inspection of the Rineco facility because the TMW was not operating during the first inspection. The purpose of the second inspection was to evaluate the incoming and outgoing streams from Rineco's TMW.

*5 Based on the March 22nd-24th and June 28th inspections and documentation provided by Rineco, EPA determined that the TMW is a thermal treatment device that applies heat (over 1000 degrees Fahrenheit) to vaporize hydrocarbons and water and thereby change the physical and chemical composition of the hazardous waste fed into the unit, by separating the waste into six waste streams after treatment in the unit: water, oil, char, metal, vapor, and "inerts."⁷ EPA states that solid and liquid phase wastes are placed in the TMW on a moving conveyor and that materials are then heated in an oxygen-limited chamber using an external heat source to vaporize hydrocarbons and water, and reduce the cohesiveness of the solid and liquid waste material. Vapors are then condensed and cooled, states EPA, and condensed vapors are passed through the oil-water separators to recover liquid hydrocarbons; the recovered hydrocarbons, along with other liquid waste, are transferred to the hydropulper where they are mixed into HWDF. Non-condensable vapors, states EPA, are combined and vented to a thermal oxidation unit ("TOU") for destruction, while solids exit the heated chamber where the materials are cooled, and the cooled material enters a vibratory screen and magnet train that separates the metal from the char. EPA states that the metal is discharged via a conveyor to dump trucks for possible sale and that the char is transferred to the hydropulper where it is mixed, along with the liquid waste, into fuel for sale to BIFs, including cement kilns. The United States argues that the TMW, far from being designed for recycling metal, is an integral part of a fuel blending activity.

Rineco, in turn, states that the TMW is a relatively simple device designed to recycle metal from hazardous and non-hazardous materials. Rineco states that metal-containing materials are placed in the TMW on a moving conveyor and that materials are then heated in an oxygen-depleted chamber via an external heat source to break the adhesive bonds of the materials that are attached to the surface of the metal. By heating the material, states Rineco, the adhesive bonds are broken, and the material separates from the metal. Rineco states the condensable vapors are captured and sent through a series of condensers/scrubbers, which cool the vapors, remove entrained solids, and carry them back in a liquid form, while the solids are sent through a series of cooling screws, vibrating screens, and magnets to further separate the metal from other inert materials. The final product of the TMW, states Rineco, is clean metal, which is sold to third parties, and all of the other separated materials (solids, liquids, and gases) are handled in accordance with RCRA and the Clean Air Act, 42 U.S.C. §§ 7401 *et seq.* With respect to these other separated materials-or output-from the TMW, Rineco acknowledges that the oil and char wind up in cement kilns where they are burned for energy recovery.

*6 Two months after EPA's March 2005 inspection, Devine, on April 12, 2005, stated in a one-sentence letter that "I have determined that the unit at the Rineco facility known as the Thermal Metal Wash Recycling Unit does not require a hazardous waste management permit pursuant to the Arkansas Pollution Control and Ecology Commission Regulation No. 23, § 261.6(c)(1)."⁸ EPA, however, states that a substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and provided to BIFs where it is burned for energy recovery and that this activity requires a RCRA permit. EPA states Rineco's RCRA Permit No. 38H-M001 does not include the treatment, storage, or disposal activities connected with the TMW, and that it has asked Rineco to apply for a modification of its RCRA permit to include such activities but that Rineco has not done so. This action followed.⁹

II.

The United States asserts five claims for relief in its original complaint concerning operation of the TMW: (1) unauthorized operation of RCRA treatment unit; (2) unauthorized operation of RCRA storage unit; (3)

unauthorized operation of RCRA disposal unit; (4) failure to notify of hazardous waste activity; and (5) failure to provide financial assurances. Rineco moves for summary judgment on each of those claims, its central argument being that the TMW does not require a RCRA permit as the TMW is engaged in the recycling process and, thus exempt from regulation under APCEC Regulation No. 23 § 261.6(c)(1). The United States likewise moves for summary judgment on each of the claims asserted in its original complaint, asserting that two separate grounds entitle it to summary judgment, either of which it states is sufficient for the United States to prevail: first, Rineco's hazardous waste activities are not eligible for the recycling process exemption as a matter of law because, under APCEC Regulation No. 23 § 261.6(a), as an intermediary to a BIF, Rineco is not eligible for the recycling exemption set forth in APCEC Regulation No. 23 § 261.6(c)(1); second, Rineco is not engaged in a recycling activity in the TMW and cannot qualify for the recycling exemption because when waste materials are abandoned by disposal, burning or incineration, they are not recycled. Both parties argue there are no genuine issues of material fact with respect to these issues and that each is entitled to summary judgment as a matter of law.

A.

Summary judgment is appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). As a prerequisite to summary judgment, a moving party must demonstrate "an absence of evidence to support the non-moving party's case." *Celotex Corp. v. Catrett*, 477 U.S. 317, 325, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). Once the moving party has properly supported its motion for summary judgment, the nonmoving party must "do more than simply show there is some metaphysical doubt as to the material facts." *Matsushita Elec. Indus. Co. v. Zenith Radio*, 475 U.S. 574, 586, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). The nonmoving party may not rest on mere allegations or denials of his pleading, but must "come forward with 'specific facts showing that there is a *genuine issue for trial*.'" *Id.* at 587 (quoting Fed.R.Civ.P. 56(c) and adding emphasis). See also *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256, 106 S.Ct. 2505, 91 L.Ed.2d 202

(1986). The inferences to be drawn from the underlying facts must be viewed in the light most favorable to the party opposing the motion. *Matsushita*, 475 U.S. at 587 (citations omitted). However, “[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no ‘genuine issue for trial.’” *Id.* (citation omitted). “Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” *Anderson*, 477 U.S. at 248. “Factual disputes that are irrelevant or unnecessary will not be counted.” *Id.*

B.

1.

*7 Addressing first the United States’ claim of unauthorized operation of RCRA treatment unit, the United States alleges that since 2003 Rineco has been an owner or operator of a unit for the treatment of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, in turn, argues that as a matter of law, Rineco’s TMW is exempt from regulation under APCEC Regulation No. 23 § 261.6(c)(1) and thus operation of the TMW does not require a RCRA permit.

a.

The Court has carefully considered the matter and agrees with the United States that Rineco’s hazardous waste activities are not eligible for the recycling process exemption as a matter of law because, under APCEC Regulation No. 23 § 261.6(a),¹⁰ as an intermediary to a BIF, Rineco is not eligible for the recycling exemption set forth in APCEC Regulation No. 23 § 261.6(c)(1).¹¹ Under § 261.6(a)(2)(ii), recyclable materials, *i.e.* hazardous wastes burned for energy recovery in BIFs, are not subject to the requirements for generators, transporters, and storage facilities listed in §§ 261.6(b) and 261.6(c), but instead are regulated under Subparts C through H of Part 266. Under Subpart H of Part 266, “[o]wners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of Sections 264,

265, and 270 of this regulation.” APCEC Regulation No. 23 § 266.101(c)(1). The Subpart H regulations provide that “[t]hese standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.” *Id.* Rineco is an intermediary fuel blender that treats hazardous wastes in the TMW that are sold to and burned for energy recovery in BIFs, including cement kilns, which are regulated under Part 266, Subpart H. Thus, the exemption set forth in § 261.6(c)(1) is inapplicable to Rineco.

Rineco concedes that recyclable materials subject to APCEC Regulation No. 23 § 261.6(a) do not qualify for the recycling exemption but argues that § 261.6(a) does not apply in the instant case because Rineco only recycles metal in the TMW. While Rineco admits that a substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and sent to BIFs where it is burned for energy recovery, Rineco contends that only the percentage of metal resulting from the treatment process should be counted as recyclable materials in assessing whether § 261.6(a) applies and that focusing on the other materials exiting the TMW that are sent for use as fuel is a “red herring.” In support of this argument, Rineco relies on a passage in EPA’s Office of Solid Waste and Emergency Response Memorandum 9521.1994(01), entitled “Regulation of Fuel Blending and Related Treatment and Storage Activities” (the “Guidance”), which provides as follows:

*8 There may be some recycling operations at a fuel blending facility that are exempt from permitting, even though the fuel blending process itself is not exempt. The exemption is only available to units that are solely engaged in permit-exempt recycling; if the reclaimed materials are sometimes sent for use as a fuel, then the recycling unit would be subject to the permitting standards.

Rineco, states that “[a]s the [G]uidance explains, if the reclaimed materials are themselves sometimes sent for use as a fuel, then the recycling unit would be subject to permitting standards (*i.e.* the unit would not “solely” be engaged in recycling activities).” In contrast, states

Rineco, "if the reclaimed materials are *never* sent for use as a fuel, like the reclaimed metal in this case, the recycling unit exemption would apply." Rineco states that because the material recycled in the TMW is metal, and metal recycled in the TMW is never burned for energy recovery, § 261.6(a)(2)(ii) does not apply to metal recycling in the TMW. Consequently, states Rineco, the materials placed into the TMW are subject to the general requirements of APCEC Regulation No. 23 § 261.6, including the recycling unit exemption in § 261.6(c)(1), and the TMW would be exempt from regulation under RCRA.

The Court rejects Rineco's assertion that the word "solely" in the Guidance exclusively refers to the ultimate use of the recycled material and that the focus should be exclusively on the percentage of metal generated from the TMW while ignoring all other outputs from the treatment process. Clearly, metal is not the only material recycled in the TMW, and APCEC Regulation No. 23 § 261.6(a)(2) specifically provides that recyclable materials, *i.e.* hazardous wastes burned for energy recovery in BIFs, are not subject to this section. Rineco points to the word "reclaimed" in the Guidance, but in the preamble to the hazardous waste regulations EPA explained that although "commercial products reclaimed from hazardous wastes are products, not wastes, and so are not subject to the RCRA Subtitle C regulations," waste-derived fuel resulting from the reclamation process continues to be governed by RCRA:

We caution, though, as we did in the proposal, that this principle does not apply to reclaimed materials that are not ordinarily considered to be commercial products, such as waste-waters or stabilized wastes. The provision also does not apply when the output of the reclamation process is burned for energy recovery or placed on the land. These activities are controlled by the provisions of the definition dealing with using hazardous wastes as ingredients in fuel or land-applied products. For instance, if a spent solvent is treated and blended with oil to sell as a fuel, that waste-derived fuel is still subject to RCRA jurisdiction.

50 Fed.Reg. 614, 634 n. 20, Final Rule-Hazardous Waste Management System: Definition of Solid Waste, January 4, 1985.¹² Thus, if reclaimed materials from the TMW are sometimes sent for use as a fuel, as indisputably occurs with oil and char, then the TMW cannot be exempt from the RCRA permitting requirements of Part 266, Subpart H.

*9 There is certainly evidence in the record showing that a substantial percentage of the output from the TMW is not metal, even though the recovery of metal clearly takes place and is one of the purposes of the TMW. While the metal recycled in the TMW is not burned for energy recovery, the deposition testimony of three former Rineco employees (whom Rineco describes as "disgruntled") and certain Rineco documents support the United States' contention that a substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and sent to BIFs where it is burned for energy recovery. Michael W. Tallent ("Tallent"), a former Rineco Production Chemist, testified that he worked as senior production chemist/warehouse manager when the first TMW was installed at Rineco and that the primary purpose of the TMW was not to recycle metal, but to blend hazardous waste into fuel which was burned for energy recovery at BIFs. Similarly, S. Bradley Cummock ("Cummock"), a former Rineco Director of Operations and who was an employee of Rineco from January 1996 through July 2003, testified that the primary purpose of the TMW, especially from a financial standpoint, was to blend hazardous waste into fuel for cement kilns, not to recycle metal. Brad Patty ("Patty"), the former Rineco Director of Operations after Cummock and who worked as Director of Operations at Rineco from August 2003 to January 2006, also testified that the primary intent of the TMW was to blend hazardous waste into fuel for cement kilns, not to recycle metal.

Certain Rineco documents concerning operation of the TMW corroborate the testimony of Rineco's former Production Chemist and Directors of Operations. Between 2003 and 2008, the annual TMW Mass Balance Reports show that the TMW treatment process produced more than twice as much oil and char as metal. In addition, a TMW Monthly Profit Analysis for the month of January 2006 (which is under seal) shows the percentage of Rineco's profit from the TMW that was derived from metal sales, a percentage that certainly seems inconsistent

with Rineco's claim that the primary purpose of the TMW is to recycle metal. Rineco characterizes its own Mass Balance Reports as "incomplete and inaccurate" and its TMW Monthly Profit Analysis as "incomplete and based on mere speculation," but Rineco cannot create facts issues with its own conflicting assertions.¹³

In sum, the Court determines that Rineco's TMW unit does not qualify for the recycling process exemption set forth in APCEC Regulation No. 23 § 261.6(c)(1) because, under APCEC Regulation No. 23 § 261.6(a)(2) (ii), hazardous wastes that are burned for energy recovery in a BIF (as are the wastes managed in Rineco's TMW unit), are subject to APCEC Regulation No. 23 Part 266, Subpart H. Were the Court to uphold Rineco's interpretation, any hazardous waste treatment unit that processed an incidental amount of recovered material that is not burned for energy recovery would qualify for the recycling exemption. Such an interpretation is contrary to the regulations and RCRA's purpose to ensure the proper treatment, storage and disposal of hazardous waste so as to minimize the present and future threat to human health and the environment. *Meghrig*, 516 U.S. at 483.¹⁴

b.

*10 The Court additionally agrees with the United States that the TMW is not eligible for the recycling exemption for a second reason because substantial hazardous wastes that are treated in the TMW are destroyed by thermal treatment and not recycled in the TMW. With respect to such activity, EPA has stated:

[W]e wish to clarify that materials being burned in incinerators or other thermal treatment devices, other than boilers and industrial furnaces, are considered to be "abandoned by being burned or incinerated" under § 261.2(a)(1)(ii), whether or not energy or material recovery also occurs.... In our view, any such burning (other than in boilers and industrial furnaces) is waste destruction subject to regulation either under Subpart O of Part 264 or Subpart O and P of Part 265. If energy or material recovery occurs, it is ancillary to the purpose of the unit-to destroy wastes by means of thermal treatment-and so does not alter the regulatory status of the device or the activity.

48 Fed.Reg. 14472, 14484, Proposed Rules, April 4, 1983.

Rineco claims that burning cannot occur in the TMW because the "materials are indirectly heated in an oxygen-depleted chamber." Rineco's use of the phrase "oxygen-depleted" is ambiguous, however, and Rineco has provided no actual evidence that oxygen is absent from the TMW. Carl Wikstrom, Director of Research and Development for Rineco, only states that the materials are heated in an "oxygen-depleted chamber via an external heat source to break the adhesive bonds of the materials that are attached to the surface of the metal." In contrast, the TMW Patent indicates that waste materials are placed in an oxygen limited chamber, not an oxygen depleted chamber. The Patent states:

The feed hopper provides the waste material to a first chamber through an airlock. The airlock, for some embodiments, is a knife gate, which largely isolates the first chamber from the feed hopper. The airlock limits air infusion into the first chamber, which is, for some embodiments, a sub-ambient pressure chamber. This isolation removes dependence on a dynamic seal. Also, the improved seals limit or prevent appreciable influx of air into the system, thereby reducing the chances for unplanned oxidation and also reducing the amount of non-condensable gases that flow through the system.... For some embodiments, an inerting gas (e.g. carbon dioxide, nitrogen, etc.) is injected into the airlock to displace air or other oxidizing agents. This reduces the oxidation that can occur in the subsequent stages of the waste processing system.

Rineco's own documentation evidences destruction or burning of materials in the TMW. On December 28, 2005, EPA asked Rineco to "complete the attached table regarding volumes of waste managed at your facility for 2003, 2004 and 2005." EPA provided a table, based on Rineco's description of the TMW, showing yearly volume of hazardous waste received (liquid and solid phases), yearly volume into the TMW, yearly volume from the

TMW divided in six outputs (water, oil, char, metal, vapors and inerts), and yearly volume into and out of the cryogenic unit. In a letter to EPA dated January 17, 2006, Rineco stated that its responses to the table were based on pounds, the numbers provided were Rineco's "best estimate," and the vapor and inerts categories were combined because Rineco was unable to separate them. The United States notes that the table showed that between 2003 and 2005, of the approximately 18.7 million lbs. of waste fed into the TMW annually, more than 2.6 million lbs. or at least 13.9% was unaccounted for, *i.e.* disposed of, burned, or incinerated in the treatment process, and that during the same period approximately 2 million lbs. or 10.7% of the output from the TMW was vapor/inerts, which are vented to the TOU where they are destroyed through burning and incineration. The United States notes as well that the presence of more than 4.4 million lbs. or at least 23.5% char indicates that the destruction of organic materials takes place in the TMW.¹⁵

*11 Rineco does not specifically dispute the above percentages but contends that the table "does not reflect all of the materials exiting the TMW and, thus, any attempt to create a mass-balance report from this information is fatally flawed." Rineco states that "[i]mportantly, the chart does not reflect the amount of solids (other than char and metal) exiting the unit" and that "[t]herefore, the [United States'] allegations that 13.9% of the materials placed into the TMW are destroyed based on the numbers in the January 2006 chart are just plain wrong and misleading to the Court."

As previously noted, Rineco's claim that its table "does not reflect all of the materials exiting the TMW" and that its own Mass Balance Reports "are incomplete and inaccurate" fails to create a genuine issue of material fact concerning the evidence indicating that some 13.9% of the materials are burned or destroyed in the TMW. In its January 17th response to EPA's information request, Rineco made no mention that the six outputs from the TMW did not reflect the total output from the TMW and Rineco did not correct the table to add an output for "solids (other than char and metal) exiting the unit." The United States argues that Rineco clearly did not do so because the "inerts" category on the table describes the same waste materials that Rineco is now calling "solids." Certainly, neither Rineco's Patent nor Rineco's Fuel Blending & Recycling Processes flow chart describe

"solids (other than char and metal) exiting the unit" but they do identify "inerts." The Patent states "[t]he metal separation system handles non-volatile fractions, including char, metal, and nonmagnetic inert substances such as, for example, glass, gravel, soil, sand, etc." and Rineco's flow chart indicates that "char, metal, and inerts" are the only solid phase materials that exit the TMW. There is no separate reference to "solids" exiting the TMW.

In any case, it is undisputed that vapor from the TMW is vented to the TOU where it is destroyed through burning and incineration.¹⁶ Thus, a portion of inputs to the TMW are volatilized by the high temperature, vented to the TOU, and destroyed through burning and incineration. In addition, the presence of substantial char shows that the destruction of organic materials takes place in the TMW.¹⁷ Accordingly, the exemption for the recycling process found at APCEC Regulation No. 23 § 261.6(c)(1) does not apply because certain of the organic hazardous wastes processed in the TMW are not recycled but instead are destroyed by thermal treatment.¹⁸

c.

For the foregoing reasons, the Court grants summary judgment to the United States on its First Claim for Relief under RCRA (Unauthorized Operation of RCRA Treatment Unit) as set forth in its original complaint.

2.

The Court now turns to the United States' claim of unauthorized operation of RCRA treatment unit. The United States alleges that since 2003 Rineco has been an owner or operator of a unit for the storage of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, however, argues that it has a valid and effective RCRA permit for the storage of hazardous waste at its facility that covers hazardous waste related to the TMW.

*12 Under APCEC Regulation No. 23 § 270.1(b), storage of hazardous waste by any person who has not applied for or received a RCRA permit is prohibited. Under

RCRA section 1004(33), 42 U.S.C. § 6903(33), "[t]he term 'storage,' when used in connection with hazardous waste, means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste." "Storage" is defined as "the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere." APCEC Regulation No. 23 § 260.10.

Rineco does not dispute that it is storing hazardous waste related to the TMW at its facility and it does not dispute that after shredding, waste materials are placed in totes which are stored near the shredders before treatment in the TMW. Rineco obtained its RCRA hazardous waste permit in August 1999 before it began operation of the TMW and the staging area of the totes for the TMW is not included in the existing permit. Thus, Rineco's failure to modify its existing RCRA permit to expressly include the hazardous waste storage areas related to the TMW is a violation of Section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10.¹⁹ Accordingly, the Court grants summary judgment to the United States on its Second Claim for Relief under RCRA (Unauthorized Operation of RCRA Storage Unit) as set forth in its original complaint.

3.

The Court now turns to the United States' claim of unauthorized operation of RCRA disposal unit. The United States alleges that since 2003 Rineco has been an owner or operator of a unit for the disposal of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, however, argues that it does not dispose of any hazardous waste related to the TMW at its facility.

As set forth above, Rineco's January 17th table regarding volumes of waste managed at its facility for 2003, 2004 and 2005 shows that Rineco disposes of hazardous waste related to the TMW. Again, Rineco's claim that its table "does not reflect all of the materials exiting the TMW" fails to create a genuine issue of material fact in the face of the evidence indicating that some 13.9% of the materials are burned or destroyed in the TMW. In addition, Rineco does not dispute that vapor, one of the outputs from

the TMW, is vented to the TOU for destruction, nor does Rineco controvert the findings of the recent EPA inspection by Duster or similar testimony from former Rineco employees Tallent, Cummock, and Patty that fugitive VOC air emissions are "leaking" from the TMW and other units at the Rineco facility.

In addition to disposal occurring at the TMW itself, it is not disputed that char and other materials from the TMW are blended into HWDF and sent off-site to BIFs where it is burned and emitted into the atmosphere or disposed or "deposited" as a waste in a landfill after the burning process is completed. Rineco argues that in order for "disposal" to occur, RCRA regulations require that the disposal must take place on the land or water at the Rineco facility. The term "disposal" is not so limited, however, but encompasses "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters." 42 U.S.C. § 6903(3); APCEC Regulation No. 23 § 260.10. The mere act of sending waste off-site for disposal does not make a unit a disposal unit; rather, Rineco is engaged in the unauthorized operation of a disposal unit because it is incorporating the char into a fuel, and the char is ultimately discharged into the air or deposited in a landfill. Accordingly, the Court grants summary judgment to the United States on its Third Claim for Relief under RCRA (Unauthorized Operation of RCRA Disposal Unit) as set forth in its original complaint.

4.

*13 The Court now turns to the United States' claim of failure to notify of hazardous waste activity. The United States alleges that Rineco has failed to file, with EPA or ADEQ, a notification of hazardous waste activity related to the TMW in compliance with Section 3010 of RCRA, 42 U.S.C. § 6930. Rineco, however, argues it submitted notification of its hazardous waste activity related to the TMW to ADEQ as part of its Hazardous Waste Annual Reports for 2003, 2004, 2005, 2006, and 2007, noting that as to each report, it indicated that the facility was a recycler of hazardous waste, included hazardous wastes recycled in the TMW in the list of regulated hazardous

wastes, and included hazardous wastes recycled in the TMW in the waste generation totals for the facility.

Section 3010 of RCRA requires Rineco to provide notice of the location and a general description of any treatment, storage or disposal activity conducted at the facility. 42 U.S.C. § 6930. Rineco's general reference on the RCRA Subtitle C Site Identification form that it is a recycler of hazardous waste and its reference to the hazardous wastes recycled in the TMW as well as its hazardous waste totals at the facility is not sufficient. Section 3010 requires the operator of a hazardous waste treatment, storage or disposal facility to file specific reports. *McClellan Ecological Seepage Situation v. Perry*, 47 F.3d 325, 329-330 n. 7 (9th Cir.1995). Rineco does not dispute that it has failed to file with EPA or ADEQ a notification of its hazardous waste activity expressly related to the TMW. Accordingly, the Court grants summary judgment to the United States on its Fourth Claim for Relief under RCRA (Failure to Notify of Hazardous Waste Activity) as set forth in its original complaint.

5.

The Court now turns to the United States' claim of failure to provide financial assurances. The United States alleges that Rineco has failed to establish financial assurance requirements for closure of the TMW and related storage units at the facility in violation of section 3004(a) of RCRA, 42 U.S.C. § 6924(a), and APCEC Regulation No. 23 § 264, Subpart H.

Rineco does not dispute that it has failed to establish financial assurances related to the TMW but instead contends that because the TMW is exempt from regulation, Rineco is not required to comply with financial assurances requirements for closure of the TMW. As set forth above, however, Rineco does not qualify for the recycling exemption in APCEC Regulation No. 23 § 261.6(c)(1). As a result, Rineco must establish financial assurances for the TMW.²⁰ Accordingly, the Court grants summary judgment to the United States on its Fifth Claim for Relief under RCRA (Failure to Provide Financial Assurances) as set forth in its original complaint.

C.

One final matter concerns Rineco's affirmative defenses. Rineco argues that if it is not entitled to summary judgment, genuine issues of fact on Rineco's affirmative defenses preclude the granting of summary judgment in favor of the United States, including whether EPA is equitably estopped from asserting claims against Rineco based on the decision of the delegated authority (*i.e.* ADEQ) that the TMW does not require a RCRA permit, whether EPA is exercising selective enforcement against Rineco, and whether Rineco is being denied equal protection. However, both Rineco and the United States have moved for summary judgment, those motions are ripe for consideration, and Rineco has not come forward with facts to support any of its affirmative defenses. Claims for equitable estoppel do not run against the federal government unless the party claiming estoppel establishes, among other things, that the government engaged in some sort of affirmative misconduct. *Miller v. U.S. Through Farmers Home Admin.*, 907 F.2d 80, 82-83 (8th Cir.1990). To establish a *prima facie* claim of selective prosecution, a party must demonstrate that others similarly situated to it were not prosecuted and that the decision to enforce the law against it was motivated by discriminatory purpose. *United States v. Perry*, 152 F.3d 900, 903 (8th Cir.1998). To establish a viable equal protection claim, Rineco must show that it was treated differently than similarly situated entities for purposes of the challenged government action. *Koscielski v. City of Minneapolis*, 435 F.3d 898, 901 (8th Cir.2006). Rineco has shown no evidence of affirmative misconduct or discriminatory purpose by the United States to support its estoppel and selective prosecution claims, and Rineco has shown no evidence that similarly situated entities received favorable treatment so as to establish a viable equal protection claim. As Rineco has shown no evidence to support these or any other affirmative defenses, summary judgment in favor of the United States is not precluded.²¹

III.

*14 For the foregoing reasons, the Court grants the United States' motion for summary judgment [doc. # 40] as to liability on each of the five claims asserted in its original complaint and denies Rineco's motion for summary judgment [doc. # 13]. This matter will proceed

as to any appropriate civil penalties and as to the three remaining claims in the United States' amended and supplemental complaint.²²

All Citations

Not Reported in F.Supp.2d, 2009 WL 801608

IT IS SO ORDERED.

Footnotes

- 1 The Court deferred ruling on these motions pending a settlement conference before a Magistrate Judge in late October 2008 that proved unsuccessful. Following that settlement conference, the Court, by Order dated November 24, 2008 [doc. # 85], granted a motion of Rineco for leave to file what it claimed to be newly discovered summary judgment evidence. In addition, the Court in that same November 24th Order granted leave of the United States to amend and supplement its complaint to add three additional claims. These additional claims are not addressed in the parties' cross-motions for summary judgment now under consideration.
- 2 Subsequent program revision applications were later approved. *Id.*
- 3 APCEC is the environmental policy-making body for Arkansas and ADEQ implements those policies.
- 4 All paragraph numberings within APCEC Regulation No. 23 are the same as those used in the equivalent Federal Part such that someone seeking, for example, the State equivalent to 40 C.F.R. § 261.3(a)(2)(i) need only refer to APCEC Regulation No. 23 § 261.3(a)(2)(i). Because Arkansas' regulations are substantially identical to EPA's regulations, analysis of the federal scheme can overlay and define that of Arkansas. *Cf. United States v. Power Engineering Co.*, 191 F.3d 1224, 1228 (10th Cir.1999) (determining that because Colorado's regulations are substantially identical to EPA's regulations, analysis of the federal scheme can overlay and define that of Colorado).
- 5 In *Harmon*, the United States Court of Appeals for the Eighth Circuit held that the federal government's right to pursue an enforcement action under RCRA attaches only when a state's authorization is revoked or when a state fails to initiate any enforcement action, and that EPA's practice of overfiling, in those states where it has authorized the state to act, oversteps the federal agency's authority under RCRA. 191 F.3d at 901-02. The Eighth Circuit's decision in *Harmon* concerning EPA's authority to overfile has not been without some criticism. *See, e.g., United States v. Power Engineering Co.*, 303 F.3d 1232 (10th Cir.2002). Such is of no consequence here, however, as the State of Arkansas has not initiated an enforcement action against Rineco concerning the matters before the Court.
- 6 These wastes contain variable levels of ignitability, corrosivity, reactivity, and toxicity, and include arsenic, barium, benzene, cadmium, carbon tetrachloride, chromium, cresol, 1, 4-dichlorobenzene, lead, mercury, wastewater treatment sludge, silver, vinyl chloride, spent halogenated and non-halogenated solvents, spent cyanide, acrylic acid, carbamic acid, DDT, sulfuric acid, toluene, xylene, etc.
- 7 Rineco does not dispute that the TMW is a type of thermal treatment unit (although Rineco states that the TMW does not, as argued by the United States, apply heat to change both the chemical and physical character and composition of the waste fed into the TMW but, rather, that the heat merely breaks the adhesive bonds of the material that are attached to the surface of the metal). Thermal treatment units that do not use internal controlled flame combustion, as the TMW does not, are classified as "miscellaneous units" and subject to the standards for the management of hazardous waste set forth in APCEC Regulation No. 23 Part 264, Subpart X, §§ 264.600-264.603. The United States does not dispute that miscellaneous units may nevertheless be potentially exempt from regulation under RCRA.
- 8 According to the United States, ADEQ's staff, including the Hazardous Waste Division Director, believe that the TMW requires a permit but that Devine took a different position. Devine's April 12th letter does not, however, revoke ADEQ's previous correspondence with the company stating that the agency's conclusion was based on Rineco's compliance with six conditions and, thus, Devine's determination seemingly was made in the context of Rineco's representations of the specific purpose and operation of the TMW.
- 9 Rineco does not dispute that notice of the commencement of this action was given to the State of Arkansas in accordance with 42 U.S.C. § 6928(a)(2).
- 10 APCEC Regulation No. 23 § 261.6(a) provides in part:
 - (a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under subsections C through H of section 266 of this regulation and all applicable provisions in section 270 of this regulation and 40 CFR Part 124:

(i) Recyclable materials used in a manner constituting disposal (subsection C);

(ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under subsection O of section 264 or 265 of this regulation (subsection H).

11 APCEC Regulation No. 23 § 261.6(c)(1) provides:

(c)(1) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subsections A through L, AA, BB, and CC of sections 264 and 265, and under sections 266, 268, and 270 of this regulation and 40 CFR Part 124, and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in § 261.6(d).)

12 Rineco proffers EPA's Revisions to the Definition of Solid Waste, Final Rule, 73 Fed.Reg. 64668-01, October 30, 2008. These revisions are of no help to Rineco, however, as the final rule clarifies that the exclusion for hazardous secondary materials that are legitimately recycled "does not include the recycling of hazardous secondary materials that are ... burned to recover energy or used to produce a fuel or otherwise contained in fuels (40 C.F.R. § 261.2(c)(2))." *Id.* at 64669, 64670, 64710, 64751.

13 Rineco, as previously noted, may not rest on mere allegations or denials of its pleadings, but must come forward with specific facts showing that there is a genuine issue for trial. *Matsushita*, 475 U.S. at 587. See also APCEC Regulation No. 23 § 261.2(f) (respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that certain material is conditionally exempt from regulation must demonstrate that they meet the terms of the exemption; in doing so, they must provide appropriate documentation to demonstrate that the material is exempt from regulation).

14 Citing EPA's RCRA Orientation Manual 2006, Rineco argues that EPA has found that distillation units engaged in the recycling of hazardous spent solvents are exempt recycling units under 40 C.F.R. § 261.6(c)(1) even though the sludge created in the distillation process is sent off-site to BIFs. The RCRA Orientation Manual does not support Rineco's position. As the Manual states, "[n]ot all hazardous wastes pose the same degree of hazard when recycled," and "[w]hile RCRA specifically exempts some wastes when recycled, some recycling processes may still pose enough of a hazard to warrant some degree of regulation." It may be true that EPA has concluded that certain unrefined waste-derived fuels and oils from petroleum refineries may justify exemption from RCRA Subtitle C, but EPA also has concluded that "[t]he process of recycling hazardous waste by burning it for energy recovery may pose significant air emission hazards. Therefore, EPA [has] established specific operating standards for units burning hazardous waste for energy recovery." Rineco, it should be noted, does not treat a single predictable pre-distillation waste stream from a petroleum refinery, but rather more than 400 different types of hazardous waste containing variable levels of ignitability, corrosivity, reactivity, and toxicity.

15 Rineco proffers as "newly discovered evidence" a declaration from Dr. W. Roy Penney, a Professor in the Department of Chemical Engineering at the University of Arkansas, who stated that "complete combustion in the TMW is impossible." Dr. Penney does not, however, conclude that *no* combustion occurs in the TMW and he does not dispute that combustion and destruction occurs in the TOU. Rineco has also proffered a declaration from an attorney, David E. Polter, who essentially opines on the legal issues in this matter. However, the Court will not consider for purposes of today's decision legal opinions that "attempt to tell the court what result to reach." *Dow Corning Corp. v. Safety National Cas. Corp.*, 335 F.3d 742, 751-52 (8th Cir.2003).

16 As indicated in the Patent, "[t]he residual non-condensable vapors are directed to a thermal oxidizer unit through an exhaustor. As is known in the art, the thermal oxidizer unit destroys air toxics and volatile organic compounds ["VOC"] that are discharged."

17 On April 15-16, 2008, David Duster ("Duster"), an environmental scientist with EPA, conducted a RCRA focused compliance evaluation at the Rineco facility and documented that fugitive VOC emissions were escaping from the TMW and other units at the Rineco facility. Similarly, former Rineco employees Tallent, Cummock, and Patty testified to fires occurring at the TMW and to VOCs and particulates that were leaked and discharged from the TMW into the air at the Rineco facility. Rineco points to the testimony of David Crew ("Crew"), ADEQ's on-site inspector, but Crew only testified that "to the best of my knowledge," there has never been a fire in the TMW. Crew did, however, testify that there have been fugitive emission issues with regard to the TMW, and he also testified that the scrap metal is a by-product of the entire process of the TMW, not the primary process, and that he believed and continues to believe that the TMW requires a RCRA permit. Rineco claims the TMW is "designed" for recycling metal, but the possibility of recycling is mentioned only twice in the 13-page Patent, stating first that certain metal (which can be fairly large, e.g. whole cans,

etc.) moving along on a conveyor belt that progresses beyond the field of a magnet "can be recycled or disposed" and, second, that the systems and processes described in the Patent "permit recycling of various materials, which would otherwise not be permitted." The word "disposal," in contrast, is referenced numerous times throughout the Patent, which, as previously noted, "relates generally to waste processing, and more particularly to systems and methods for processing heterogeneous waste materials."

18 Rineco also references EPA's "A Citizen's Guide to Thermal Desorption" ("Guide"), which describes the use of thermal desorption under the supervision of EPA as a method to clean up pollution at Superfund sites stating that "[t]he dust and harmful chemicals are separated from the gases and disposed of safely. The clean soil is returned to the site." Rineco, however, neither returns "clean soil" to its facility nor disposes of the separated materials in a Subtitle C landfill and so the Guide is not applicable.

19 The Court agrees with the United States that the permit requirements apply to the staging area for the toles given that when material is waiting to be placed in the TMW, there are emissions that can occur that would otherwise not be occurring in the absence of the TMW.

20 During oral argument, Rineco acknowledged that the financial assurances argument turns on the exemption issue and that if the Court finds that the TMW is covered under RCRA, which the Court has today so done, then Rineco is required to establish financial assurances for the TMW.

21 Rineco alludes to seeking additional discovery on its affirmative defenses but a party opposing summary judgment who believes that he or she has not had adequate opportunity to conduct discovery must seek relief pursuant to Fed.R.Civ.P. 56(f), which requires that party to show what specific facts further discovery might unveil. *United States v. Casino Magic Corp.*, 293 F.3d 419, 426 (8th Cir.2002) (citations omitted). This, Rineco has failed to do. In addition, during a telephone conference held on November 19, 2008, Rineco agreed that discovery could be stayed until such time as the Court ruled on the parties' cross-motions for summary judgment on liability.

22 As noted in the November 24th Order, the Court will consider for purposes of determining any appropriate civil penalties the seriousness of the violation, any good faith efforts to comply, the harm caused by the violation, any economic benefit derived from noncompliance, the violator's ability to pay, the government's conduct, and the clarity of the obligation involved. *United States v. Ekco Housewares, Inc.*, 62 F.3d 806, 815 (6th Cir.1995). With respect to economic benefit, the Court reiterates that the goal of the economic benefit analysis is to prevent a violator from profiting from its wrongdoing, level the economic playing field, and prevent violators from gaining an unfair competitive advantage. *United States v. Municipal Authority of Union Township*, 150 F.3d 259, 263-64 (3rd Cir.1998) (citation omitted). See also *Pound v. Aerosol Company, Inc.*, 498 F.3d 1089, 1099-1100 (10th Cir.2007) (in determining economic benefit of noncompliance under Clean Air Act ("CAA"), "the better argument" is that "any profits realized through the sale, or offer of sale, of a prohibited product ought to be included when assessing the economic benefit of a CCA violation, the rationale being that one ought not to profit from one's wrongful conduct;" rejecting the argument that "the economic benefit is more properly measured by considering the costs that it would have incurred to comply with the CAA (i.e., the cost of reformulation)"); *Ekco Housewares*, 62 F.3d at 816 (district court did not abuse its discretion in determining that the amount of the RCRA penalty could be based on the economic benefit gained through noncompliance, including cost savings realized by noncompliance, and district court properly considered the deterrence effect not just on defendant but on the regulated community as a whole). Thus, while it may be that the economic benefits calculation ideally begins with the costs that should have been spent to achieve compliance, *Aerosol Company*, 498 F.3d at 1100, the Court will consider all relevant documentation that could lead to a reasonable approximation of economic benefit to Rineco during the period that the TMW has been operating without a permit, including: (1) the cost of applying for and obtaining a RCRA permit; (2) TMW profit from the start of its operation to the present; (3) the pollution control costs associated with the RCRA permit; and (4) other benefits such as any competitive advantage Rineco has obtained by charging generators a lower price to dispose of waste in a non-regulated process.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 Ross Avenue
Dallas, Texas 75202-2733

JUN 24 2016

Mr. Estuardo Silva
Louisiana Department of Environmental Quality
Office of Environmental Services
Waste Permits Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

RE: Draft Hazardous Waste Modified Operating and Post Closure Permit
Chemical Waste Management, Inc.
7170 John Brannon Road
Carlyss, LA 70665
Permit# LAD00077201-OP-RN-MO-1
AI# 742/PER20140007

Dear Mr. Silva:

EPA has the following comments on the draft Hazardous Waste Operating and Post Closure Permit for the Chemical Waste Management, Inc. facility located at 7170 John Brannon Road, Carlyss, LA 70665 (Draft Permit). Chemical Waste Management, Inc. (Chem Waste) seeks to add two oil recovery units (ORUs), two thermal desorber units (TDUs), and 19 associated tanks to its operations at its Carlyss, Louisiana facility. The ORUs will be utilized to separate recoverable oils from drilling fluids, refinery tank bottoms, commercially exempt waste, and other non-hazardous and hazardous waste. The TDUs will treat contaminated tank bottoms, sludge, catalyst slurry oil, and other non-hazardous and hazardous waste. The TDUs will be designed to separate organic constituents from a waste stream by condensing the organic components, which would allow for the recovery or disposal of the contaminants. The non-condensable gases will be routed to a thermal oxidizer unit (TOU). The TDU is proposed to be permitted as a miscellaneous unit.

Condition II.E.25.e of the Draft Permit provides that "[o]ne hundred and eighty (180) days before planned construction, the Permittee must submit finalized engineering specifications and operating parameters for the proposed Thermal Desorber Units to the Administrative Authority for approval. The information submitted must comply with the requirements of this permit and L.A.C. 33:V. Chapter 32, and all applicable regulations." Chapter 32 is entitled "Miscellaneous Units", and is the State equivalent of 40 C.F.R. Part 264, Subpart X. Due to the absence of any proposed engineering specifications, performance test, operating conditions, operating parameters, monitoring and recordkeeping requirements, we have identified permit requirements for the TDU and TOU below that we believe are required by the regulations for operation of the TDU and TOU.

How the TDU and TOU are permitted determine the appropriate permit requirements for the units. The material being treated in the TDU and the TOU is already a hazardous waste. Thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA, 54 Fed. Reg. 50968, 50973 (December 11, 1989). The combustion of the non-condensable gases in the TOU meets the

definition of "thermal treatment" in L.A.C. 33:V.109 [40 C.F.R. § 260.10] and thus requires a RCRA permit. The TOU would meet the definition of incinerator in L.A.C. 33:V.109 [40 C.F.R. § 260.10] (an enclosed device that uses controlled flame combustion). However, rather than permitting the TOU as an incinerator, LDEQ could permit the TDU and TOU together as a miscellaneous unit under L.A.C. 33:V. Chapter 32 [40 C.F.R. Part 264, Subpart X]. If this occurs, then LDEQ is required to include in the permit requirements from L.A.C. 33:V. Chapters 3, 5, 7, 17, 19, 21, 23, 25, 27, 29, 31, 4301.F, H, 4302, 4303 and 4305, all other applicable requirements of L.A.C. 33:V. Subpart 1, and of 40 C.F.R. Part 63, Subpart EEE and 40 C.F.R. Part 146, that are appropriate for the miscellaneous unit being permitted.¹

The decisions as to what appropriate requirements would be included in the permit would be left to LDEQ. However, we believe that the permit conditions would be similar to those set forth in the enclosed Consent Agreement and Final Order, In Re: US Ecology Texas, Inc. and TD*X Associates, LP, EPA Docket Nos. RCRA-06-2012-0936 and RCRA-06-2012-0937, filed October 4, 2012. These permit conditions would include, but not be limited to: 1) a startup, shutdown, and malfunction plan; (2) a performance test, which includes meeting a 99.99% destruction removal efficiency for each principle organic hazardous constituent and meeting certain emission limits; (3) automatic waste feed cutoff system; (4) operating parameters; and (5) investigation, recordkeeping, testing, and reporting requirements. This position was also previously communicated to LDEQ in a letter from EPA to Mr. J. D. Head dated May 2, 2016, in which a copy was sent to LDEQ. A copy of this letter is also enclosed.

If you have any questions, please feel free to call me at (214) 665-8022.

Sincerely,



Susan Spalding
Associate Director
Hazardous Waste Branch (6MM-R)
Multimedia Division

Enclosure

¹ The equivalent Federal provisions are 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146.
40 C.F.R. § 264.601.



TRADEBE

At Work

SOLID DISTILLATION SYSTEM

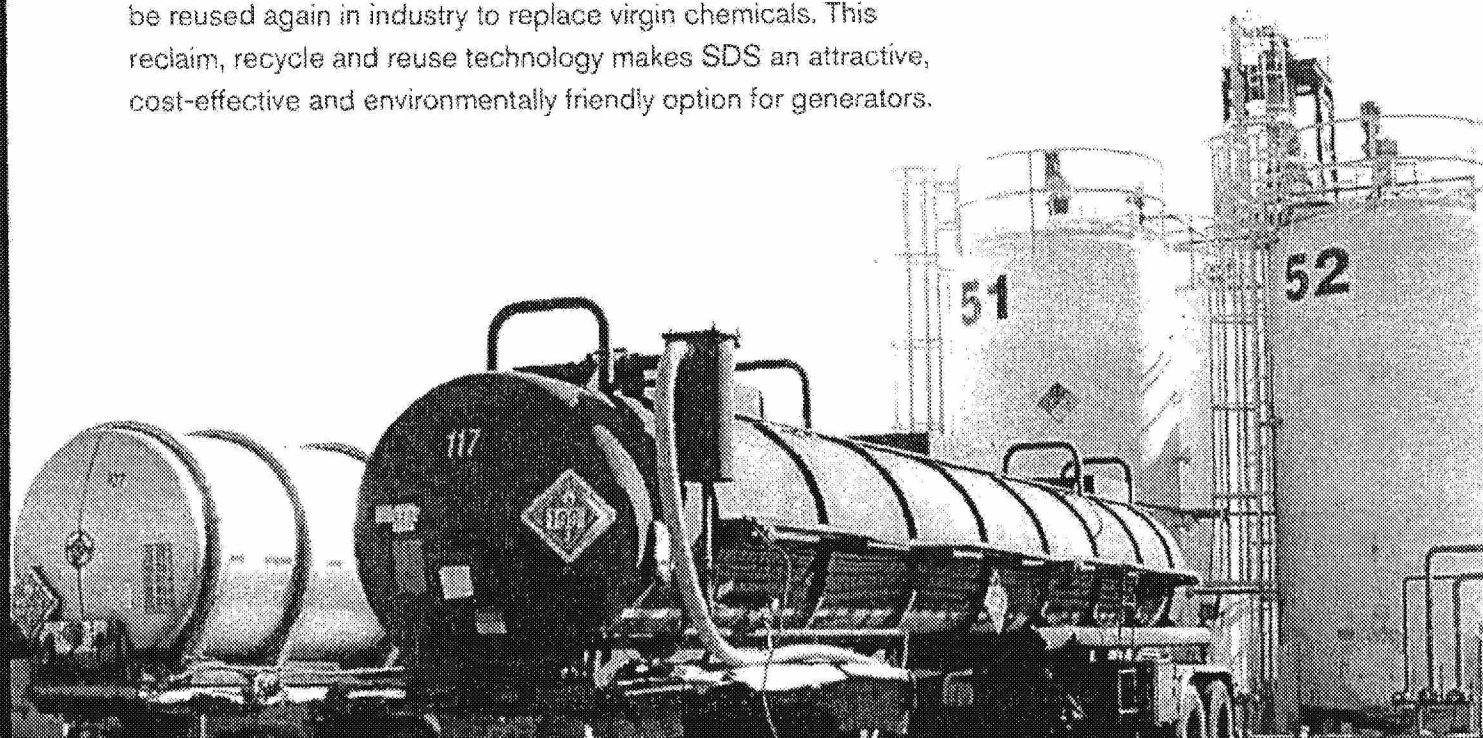


Tradebe's Solid Distillation System (SDS) is a positive step forward in waste recycling technology and a new, cost-effective way for generators to recycle their organic solid waste.

Before SDS, most solid waste was incinerated in a process designed to destroy its hazardous organic content by driving off volatiles and burning excess gases.

After incineration, residual materials were landfilled. Now, SDS offers a more responsible solution. Wastes such as paints, resins, polymers, solvent-soaked rags, and refinery wastes have their hazardous organic content removed and recycled so it can be reused again in industry to replace virgin chemicals. This reclaim, recycle and reuse technology makes SDS an attractive, cost-effective and environmentally friendly option for generators.

SDS is an attractive, cost-effective and environmentally friendly option for generators.



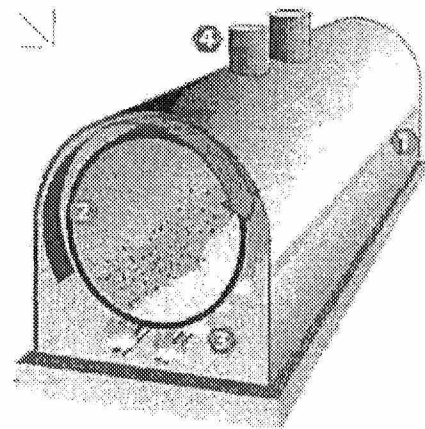
SDS IS UNIQUE FOR FOUR IMPORTANT REASONS

1. Processed material never touches the heat source.
2. Volatile and semi-volatile organics are "baked out" of the waste so they can be reclaimed, distilled and recycled.
3. Tradebe's SDS system is built to handle large volumes of solid waste and work continuously.
4. After processing, a portion of the residual material can be beneficially used in energy recovery.

HOW IT WORKS AND WHY IT'S BETTER

THE SDS THERMAL PROCESSOR CONTAINS FOUR MAIN COMPONENTS.

1. A thermal enclosure that surrounds the entire process
2. A rotating waste processing chamber located inside the thermal enclosure
3. An indirect heating system located under the rotating chamber
4. A heat exhaust system that reclaims and reuses process heat



Shredder

Solid Waste
Processing Unit

Processed Material

Process Gases

Clean Processed
Scrap Material
Metal

Condensate

Quench
Prescrubber



RESPONSIBLE MANAGEMENT, START TO FINISH

The waste typically arrives in metal drums. Tradebe chemists sample and profile each shipment to ensure compatibility with the SDS process.

Once accepted, the drums containing waste are processed through a powerful shredder that reduces everything to a uniform size. The shredded waste is fed into an entry valve at the top of the long, oven-like rotating process chamber. The anaerobic atmosphere inside the process chamber is designed to prevent the oxidation of hydrocarbon components as they are driven from the wastes.

As wastes tumble down the rotating cylinder, they are indirectly heated to very high temperatures; the heat is applied to the outside of the rotating chamber so the material on the inside is never exposed to direct flame.

The high internal temperatures drive all volatile and semi-volatile organic chemicals from the solids. The organic components are collected, condensed, and sent to an oil/water separator as a water/organic mixture to be processed.

While SDS is a fully automated technology, skilled on-site personnel, working from a control center, monitor the process every step of the way to ensure a high quality end product. From the control terminal the operator

can visually monitor and operate every key element in the process.

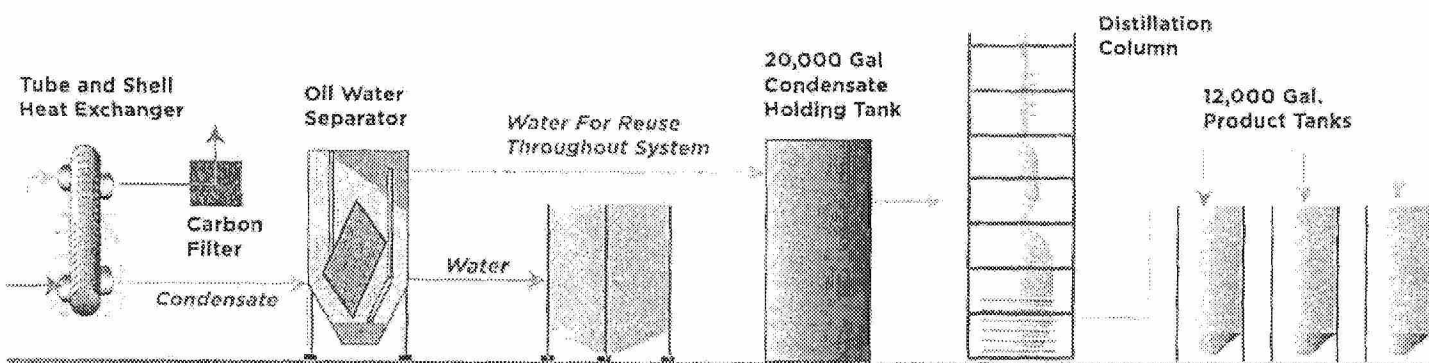
WHAT WASTES CAN BE PROCESSED?

Virtually any organic solid waste can be processed through SDS, including paint waste, solvent soaked rags, resins, polymers, production debris, refinery waste and discarded commercial products, and many more similar wastes.

Once waste is processed through SDS, the generator receives a Certificate of Recycling that affirms the waste has been recycled. The generator then has no further liability. The Certificate of Recycling is also beneficial for generators with ISO 14001 programs and Environmental Management System recycling goals.



Returning potentially hazardous chemicals to industry for reuse, rather than simply wasting their valuable organic content through incineration, is what Tradebe's responsible waste management program is all about. SDS technology achieves waste minimization and recycling goals by transforming waste into valuable recycled products.



SDS BENEFITS

- *SDS can effectively process virtually any solid organic hazardous waste.*
- *SDS helps generators meet Environmental Management Systems objectives.*
- *SDS prevents pollution while promoting recycling and reuse.*
- *SDS helps customers meet US EPA's RCRA Conservation Challenge.*
- *SDS eliminates the release of hazardous constituents into the atmosphere.*
- *SDS conserves energy while keeping waste out of the environment.*
- *SDS reclaims valuable constituents found in solid hazardous waste and reduces the demand for virgin chemicals.*

Solid Distillation System (SDS) is a positive step forward in waste recycling technology. SDS offers customers an effective and cost-efficient method for recycling organic solid waste that might otherwise be incinerated or landfilled. SDS extracts the organics from solid hazardous waste and transforms them into reusable products. SDS recycled products are being beneficially used now in numerous industries throughout the country in place of virgin chemicals.

SDS...
*New technology
for a new world of
waste recycling.*



Sustainability
At Work

TRADEBE

**Tradebe Treatment &
Recycling, LLC**

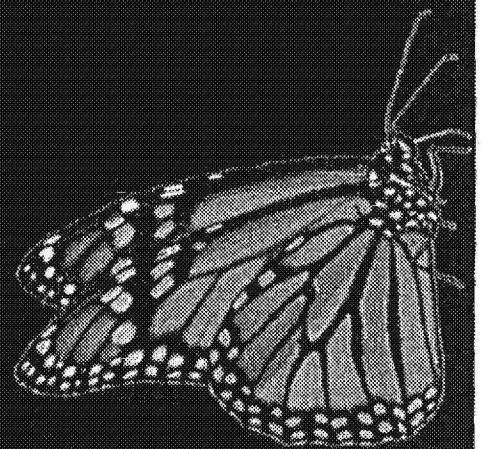
A Division of Tradebe
Environmental Services, LLC

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UNITED STATES ENVIRONMENTAL PROTECT.

REGION 6
1445 Ross Avenue
Dallas, Texas 75202-2733

2 MAY 2016

Mr. J.D. Head
Fritz, Byrne, Head & Fitzpatrick, PLLC
221 West 6th Street
Suite 960
Austin, Texas 78701

Dear Mr. Head:

Thank you for your October 30, 2015 letter requesting clarification of the hazardous waste regulatory standards for thermal desorption units (TDUs) installed at RCRA treatment, storage, and disposal facilities (TSDFs). I apologize for the delay in responding to your request. In your scenario, the TDU reclaims oil from oil bearing hazardous wastes generated by petroleum refining, production, or transportation practices. You describe a TDU as a device that heats solid material to vaporize, remove, and separate organic constituent materials from solids. In the scenario you describe at a TSDF, the separated organic constituents are typically condensed and recovered as a liquid oil. The TDU process also generates a vent gas after the condensing stream.

Your inquiry also references 40 C.F.R. § 261.6(a)(3)(iv)(C)¹, which provides that:

Oil reclaimed from oil-bearing hazardous waste from petroleum refining, production, or transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the used oil specification under 40 C.F.R. § 279.11 is not subject to regulation under 40 C.F.R. Parts 262 – 268, 270, or 40 C.F.R. Part 124, and is not subject to the notification requirements of Section 3010 of RCRA.

If the above conditions are met, then the reclaimed oil can be burned as a non-hazardous fuel. If the oil-bearing hazardous waste is not from petroleum refining, production, or transportation practices, then the reclaimed oil is subject to RCRA regulation.

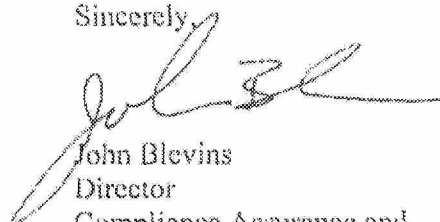
If a TDU combusts all or a portion of the vent gas, combustion of the TDU vent gas from RCRA hazardous waste or recyclable materials [40 C.F.R. § 261.6(a)(1)] is considered thermal treatment that is regulated by RCRA. The material being treated (oil-bearing hazardous waste) is already a hazardous waste. Heating hazardous wastes to a gaseous state is subject to regulation under RCRA as treatment of hazardous waste, and thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA. 54 Fed. Reg. 50968, 50973 (December 11, 1989). Thus, thermal treatment of the vent gas requires a RCRA permit.

¹ Since you did not reference a specific State in which your client may operate a TDU, this letter cites to the applicable federal regulations. If the State has an authorized RCRA program, the corresponding state regulation would be applicable.

If the vent gas is combusted in the combustion chamber of the TDU, then a permit under 40 C.F.R. Part 264, Subpart O is required, because the TDU would meet the definition of incinerator in 40 C.F.R. § 260.10 (an enclosed device that uses controlled flame combustion). If, on the other hand, the vent gas is vented to and combusted in a thermal oxidizing unit (TOU), the permitting authority may be able to permit the entire unit (TDU and TOU) as a miscellaneous unit under 40 C.F.R. Part 264, Subpart X. A RCRA permit would be required even if the facility is operating as a RCRA exempt recycling activity under 40 C.F.R. § 261.6(a)(3)(iv)(C). If the permitting authority decides to issue a 40 C.F.R. Part 264, Subpart X permit, the permitting authority is required to include in the permit requirements from 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146 that are appropriate for the miscellaneous unit being permitted as required in 40 C.F.R. § 264.601. The decisions as to what appropriate requirements would be included in the permit would be left to the permitting authority. However, EPA would expect that the permit conditions would be similar to those set forth in the enclosed Consent Agreement and Final Order, In Re: US Ecology Texas, Inc. and TD*X Associates, LP, EPA Docket Nos. RCRA-06-2012-0936 and RCRA-06-2012-0937, filed October 4, 2012.

If you have any questions, please feel free to contact Guy Tidmore of my staff at (214) 665-3142 or via e-mail at tidmore.guy@epa.gov.

Sincerely,



John Blevins
Director
Compliance Assurance and
Enforcement Division

Enclosure

Cc: Penny Wilson, ADEQ
Lourdes Iturralde, LDEQ
John Kieling, NMED
Mike Stickney, ODEQ
James Gradney, TCEQ



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 Ross Avenue
Dallas, Texas 75202-2733

JUN 24 2016

Mr. Estuardo Silva
Louisiana Department of Environmental Quality
Office of Environmental Services
Waste Permits Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

RE: Draft Hazardous Waste Modified Operating and Post Closure Permit
Chemical Waste Management, Inc.
7170 John Brannon Road
Carlyss, LA 70665
Permit# LAD00077201-OP-RN-MO-1
AI# 742/PER20140007

Dear Mr. Silva:

EPA has the following comments on the draft Hazardous Waste Operating and Post Closure Permit for the Chemical Waste Management, Inc. facility located at 7170 John Brannon Road, Carlyss, LA 70665 (Draft Permit). Chemical Waste Management, Inc. (Chem Waste) seeks to add two oil recovery units (ORUs), two thermal desorber units (TDUs), and 19 associated tanks to its operations at its Carlyss, Louisiana facility. The ORUs will be utilized to separate recoverable oils from drilling fluids, refinery tank bottoms, commercially exempt waste, and other non-hazardous and hazardous waste. The TDUs will treat contaminated tank bottoms, sludge, catalyst slurry oil, and other non-hazardous and hazardous waste. The TDUs will be designed to separate organic constituents from a waste stream by condensing the organic components, which would allow for the recovery or disposal of the contaminants. The non-condensable gases will be routed to a thermal oxidizer unit (TOU). The TDU is proposed to be permitted as a miscellaneous unit.

Condition II.E.25.e of the Draft Permit provides that "[o]ne hundred and eighty (180) days before planned construction, the Permittee must submit finalized engineering specifications and operating parameters for the proposed Thermal Desorber Units to the Administrative Authority for approval. The information submitted must comply with the requirements of this permit and L.A.C. 33:V. Chapter 32, and all applicable regulations." Chapter 32 is entitled "Miscellaneous Units", and is the State equivalent of 40 C.F.R. Part 264, Subpart X. Due to the absence of any proposed engineering specifications, performance test, operating conditions, operating parameters, monitoring and recordkeeping requirements, we have identified permit requirements for the TDU and TOU below that we believe are required by the regulations for operation of the TDU and TOU.

How the TDU and TOU are permitted determine the appropriate permit requirements for the units. The material being treated in the TDU and the TOU is already a hazardous waste. Thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA, 54 Fed. Reg. 50968, 50973 (December 11, 1989). The combustion of the non-condensable gases in the TOU meets the

definition of "thermal treatment" in L.A.C. 33:V.109 [40 C.F.R. § 260.10] and thus requires a RCRA permit. The TOU would meet the definition of incinerator in L.A.C. 33:V.109 [40 C.F.R. § 260.10] (an enclosed device that uses controlled flame combustion). However, rather than permitting the TOU as an incinerator, LDEQ could permit the TDU and TOU together as a miscellaneous unit under L.A.C. 33:V. Chapter 32 [40 C.F.R. Part 264, Subpart X]. If this occurs, then LDEQ is required to include in the permit requirements from L.A.C. 33:V. Chapters 3, 5, 7, 17, 19, 21, 23, 25, 27, 29, 31, 4301.F, H, 4302, 4303 and 4305, all other applicable requirements of L.A.C. 33:V. Subpart 1, and of 40 C.F.R. Part 63, Subpart EEE and 40 C.F.R. Part 146, that are appropriate for the miscellaneous unit being permitted.¹

The decisions as to what appropriate requirements would be included in the permit would be left to LDEQ. However, we believe that the permit conditions would be similar to those set forth in the enclosed Consent Agreement and Final Order, In Re: US Ecology Texas, Inc. and TD*X Associates, LP, EPA Docket Nos. RCRA-06-2012-0936 and RCRA-06-2012-0937, filed October 4, 2012. These permit conditions would include, but not be limited to: 1) a startup, shutdown, and malfunction plan; (2) a performance test, which includes meeting a 99.99% destruction removal efficiency for each principle organic hazardous constituent and meeting certain emission limits; (3) automatic waste feed cutoff system; (4) operating parameters; and (5) investigation, recordkeeping, testing, and reporting requirements. This position was also previously communicated to LDEQ in a letter from EPA to Mr. J. D. Head dated May 2, 2016, in which a copy was sent to LDEQ. A copy of this letter is also enclosed.

If you have any questions, please feel free to call me at (214) 665-8022.

Sincerely,



Susan Spalding
Associate Director
Hazardous Waste Branch (6MM-R)
Multimedia Division

Enclosure

¹ The equivalent Federal provisions are 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146. 40 C.F.R. § 264.601.



TD*X Associates LP
148 South Dowlen Road, PMB 700
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From the Desk of
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TD*X Associates, LLC
PO Box 13216
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ph (919) 349-1583
FAX (509) 692-8791
E-mail: cpalmer@tdxassociates.com

July 16, 2018

Oregon Department of Environmental Quality
Eastern Region, Bend Office
Attn: Mr. David Anderson
475 NE Bellevue Drive, Suite 110
Bend, OR 97701

VIA Email. anderson.david@deq.state.or.us

SUBJECT: Class 3 Permit Modification Request for Incorporation of Organic Recovery Unit 2 Tanks into the Chemical Waste Management of the Northwest Hazardous Waste Permit ORD 089 452 353

Dear Mr. Anderson;

I have reviewed the May 30, 2018 email notification regarding the subject Class 3 Permit Modification regarding CWMNW's request to install a second Organic Recovery Unit (ORU-2). This unit is actually a thermal desorption unit (TDU) that provides thermal treatment of hazardous waste materials and combusts a portion of the waste material in an associated thermal oxidizer (TO). This letter presents my comments on the permit notice. I am also providing comments on CWMNW's permit modification documents as it relates to this matter.

I request that a public hearing be scheduled to provide for public comment on this permit action. This is especially appropriate considering the large difference between the draft permit conditions and what are required for RCRA permitted hazardous waste thermal treatment as proposed by CWMNW.

I am trying to secure the actual permit so as to be able to provide specific comments on the permit language. Your staff is working to provide the permit document, which I understand is approximately 25 pdf files that are too large to email. I hope that you can accept my comments in this letter in advance of specific comments regarding the appropriate permit language to regulate the operation of a TDU that combusts all or a portion of the vent gases resulting from the thermal treatment of hazardous waste.

The EPA has clearly determined that a TDU such as proposed by CWMNW is fully regulated hazardous waste thermal treatment, subject to RCRA permitting under 40 CFR Part 264 Subpart X as a “Miscellaneous Unit.” This is the case even for units that are engaged in a legitimate recycling activity, such as the recovery of oil from oil bearing hazardous waste from petroleum refining, production and transportation practices. Furthermore, the unit is subject to compliance with the emission limits of 40 CFR Part 63 Subpart EEE (i.e. MACT EEE). Exhibit 1 provides EPA letters communicating these requirements.

Both the Permit notice and the CWMNW standalone attachments 22 and 23 lack any requirement or commitment for the TDUs to meet the emission limits that are required to be met for hazardous waste thermal treatment that is permitted under the Miscellaneous Unit standards of 40 CFR Part 264 Subpart X. Under these statute, and specifically detailed in multiple EPA determinations since 2010, the TDUs must be required to meet the emission limits from 40 CFR Part 63 Subpart EEE. The Draft permit should be revised to specifically include these requirements and establish that the exhaust gases from the TDU thermal oxidizer meet promulgated emission limits under 40 CFR 63.1219(b), including meeting specified emission limits for dioxins and furans, mercury, semi-volatile metals (cadmium and lead), low-volatile metals (arsenic, beryllium and chromium), carbon monoxide and hydrocarbons, hydrogen chloride and chlorine gas, particulate matter, and destruction and removal efficiency (DRE).

In addition to requiring the TDUs to meet the appropriate emission limits, both the Draft permit and the permit application must be revised to include the following:

- CWMNW should provide the Department with detailed information describing the waste intended to be managed and the appropriate technical information for the hazardous waste thermal treatment unit, as required by 40 CFR §270.19;
- CWMNW should provide a “trial burn” plan or “comprehensive performance test” (CPT) plan specifically addressing demonstrating their unit’s compliance with 40 CFR Part 63 Subpart EEE (aka MACT EEE) emission limits, and the Department should make implementation of this testing a condition of the operation of the TDUs (typically within the first 720 hours of operation);
- CWMNW should provide a description of the ORU-2 automatic waste feed cutoff (AWFCO) system, and adopt appropriate interim operating parameter limits (OPLs) that will assure continued compliance with MACT EEE emission limits, adopt final OPLs based on measurements made in the CPT when the unit is operating in compliance with MACT EEE emission limits, and the Department should make compliance with these AWFCOs and OPLs a condition of the permit;
- CWMNW should provide detailed feedstream management plan, perferably as part of the facility waste acceptance plan (WAP) to assure that OPLs related to the ORU-2 feedstream are in continuous compliance with values demonstrated in the CPT; such as limits on the mass feed rate and/or concentration for mercury, semi-volatile metals, low-volatile metals, and hydrogen chloride generators.
- CWMNW should provide detailed description and compliance and monitoring limits

for air emissions control associated with the proposed waste receiving activities for the ORU. It is well known that oil bearing hazardous waste from petroleum refining contains VOCs greater than 500 ppm, and the receiving and management of that material is subject to the requirements of 40 CFR Part 264 Subpart CC.

In support of the above comments I refer the Department to US District Court Eastern District of Arkansas, Civil Action 4-07-CV 01189-SWW, United States of America vs. Rineco Chemical Industries, May 19, 2010 Consent Decree. This document is provided in Exhibit 2. In the Rineco matter USEPA Region 6 and the Federal Court concluded that a thermal desorption unit that combusts in an associated thermal oxidizer the non-condensable organic chemical constituents generated from hazardous waste feeds is a RCRA permitted thermal treatment unit subject to 40 CFR Part 264 Subpart X, and specifically subject to the appropriate requirements of both 40 CFR Part 264 Subpart O and 40 CFR Part 63 Subpart EEE. Rineco was required to adopt "interim" operating parameter limits so that operation of the TDU and TO did not exceed Subpart EEE emissions limits, and to prepare a CPT plan, and to perform a CPT, and to adopt final operating parameter limits based on the CPT such that Subpart EEE emissions limits were not exceeded during subsequent operation of the TDU and its associated TO.

This regulatory doctrine has since been reinforced through USEPA Region 6 Consent Agreement and Final Order (CAFO) with US Ecology Texas and TD*X Associates LP, dated October 4, 2012. That CAFO drew essentially the same conclusions as in the Rineco matter. Furthermore, USEPA Region 6 has recently issued a guidance letter confirming this regulatory doctrine for TDUs that are located at treatment, storage and disposal facilities (TSDFs). Both that guidance letter, addressed to J.D. Head dated May 2, 2016, and the request letter that lead to it are included as Exhibit 1 to this comment letter.

I must also point out that CWM's Lake Charles, LA facility is installing two TDUs for the exact same purpose as the proposed ORU-2 at CWMNW. EPA has determined that those units are subject to RCRA permitting under 40 CFR Part 264 Subpart X and must comply with the MACT EEE emission limits. A June 24, 2016 letter from EPA to LDEQ is provided in Exhibit 1 to this affect. The CPT plan for these units is provided as Exhibit 3 to this letter.

I have an additional comment related to the fact that CWMNW appears to be planning on generating and selling a recycled oil from the processing of hazardous waste in the ORUs. The Department should implement specific conditions of operation for both ORUs to preclude the disposal of listed hazardous waste in the "recycled oil" that is generated from these units. The Waste Analysis Plan ("WAP") provided by CWMNW should include provisions for testing of the "recovered oil" to establish that it is neither a hazardous waste, or derived from a hazardous waste. The WAP should further provide a feedstream management plan for the ORUs to assure that "recovered oil" generated by these units does not instead contain listed or otherwise hazardous waste materials. In the absence of these features of the WAP, the Department should make a condition of operation of the ORUs that the oil recovered from them be manifested and disposed as hazardous waste.


Finally, I might add that the existing thermal desorption unit (ORU-1) operated by CWMNW should be subject to compliance with the same emission limits, testing requirements, installation of an AWFCO, and adoption of OPLs as described above. It would be most appropriate to include these requirements in the upcoming 10 yr renewal of the CWMNW RCRA Part B permit. If the units are identical in design and mode of operation, the same testing and OPL settings would be appropriate for ORU-1 as for ORU-2. However, that is a matter to be determined based on a detailed review of the design and operating plan for the ORU-1 unit.

It is difficult to tell from the notice. However, the Stand Alone Attachment #22 indicates the ORU-2 was constructed in 2017. If the unit is presently in operation, it should be immediately required to come into compliance with RCRA, adopt interim OPLs, perform a CDT, and adopt final OPLs.

I am also providing detailed itemized comments on both the published Draft Permit Attachments. These comments are provided on the following pages.

I cannot stress enough to you the importance of addressing each of my comments with additional submission of information by CWMNW and appropriate operating and testing requirements in the final permit. I will be calling you and Richard Duval to verify your understanding of my comments and to confirm the Department's plan for requiring appropriate action by CWMNW in this matter.

Sincerely,

 2018.07.16
17:12:41 -04'00'

Carl R. Palmer, P.E.
TD*X Associates LP

Cc Tim Hamlin USEPA Region 10

ITEMIZED COMMENTS ON ODEQ DRAFT PERMIT MODIFICATION

Appendix D – Stand Alone Document #22 Organic Recovery Unit #2

Section 1.4 Wastes Approved for Recycling

This section incorrectly states that the waste material being treated by the system is excluded under 40 CFR 261.6(3)(iv)(C). First, the correct citation is 40 CFR 261.6(a)(3)(iv)(C). That exclusion from RCRA for recycled materials states:

(a)(3) The following recyclable materials are not subject to regulation under parts 262 through parts 268, 270 or 124 of this chapter, and are not subject to the notification requirements of section 3010 of RCRA

...

(a)(3)(iv)(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under §279.11 of this chapter.

This exclusion pertains to only the oil reclaimed from ORU-2, provided that the feed materials are oil bearing hazardous waste (OBHW) exclusively from petroleum refining, production, and transportation practices, and that the reclaimed oil meets the used oil fuel specification at §279.11. The exclusion does not apply to the OBHW received at the facility, nor to the residuals from the treatment process. Only the reclaimed oil is excluded from RCRA. Based on EPA guidance and enforcement actions, because the ORU-2 combusts the gases derived from thermal treatment of the OBHW, the recycling process is subject to permitting under 40 CFR 264 Subpart X and is also subject to the emission limits of MACT EEE.

The section should be rewritten incorporating the above permit doctrine.

Section 1.5 Waste Segregation

This section seems to indicate that the ORU-2 unit may be used to manage materials in a mode that is not for recycling, but rather for disposal of “non-exempt” RCRA regulated materials. If material with different chemical composition than OBHW from petroleum refining is intended to be managed in ORU-2, then the waste description, RCRA codes, chemical and physical properties of that material should be added to the planning documents for the CPT. Appropriate unit and feedstream OPLs should be included for that additional material as a second mode of operation in the CPT.

Section 2.4 Feed Systems

It is noted that OBHW feed material frequently has total VOC content greater than 500 ppm. This material is subject to emission control under 40 CFR 264 Subpart CC. This section describes the creation of waste piles in building B-5. No description of Subpart CC compliant emission controls is provided.

2.7 Petroleum Fractions

This section improperly cites 40 CFR 261.4(a)(12). That exclusion from RCRA is available only to oil recovered from OBHSM at petroleum refineries and injected into the refining process as part of the continuous manufacturing process. It is not available to recovered oil from a TSDF. Furthermore, the reclaimed oil is only excluded under 40 CFR 261.6(a)(3)(iv)(C) if it meets the used oil specification in Table 279.11 and the oil is burned as a fuel. That qualification should be added to the text.

The recovered oil can be recycled and sold to a refinery for insertion into the refining process as an effective substitute for crude oil or other petroleum fractions. This is a most basic exclusion in RCRA, that products are not waste, and is neither part of the Definition of Solid Waste nor exclusions from it. To implement that exclusion, the recycling would require both CWMNW and the receiving refinery to perform a legitimacy determination, and enter into a contract, and some other basic requirements to prevent discard. The permit should also include appropriate conditions to assure that this provision is implemented without any discard, or inappropriate fuel burning of off-specification material.

2.9 Air Emission Controls

The following text should be added at the end of the paragraph.

The combined operation of the ORU-2 and the thermal oxidizer are regulated by 40 CFR 264 Subpart X, and are subject to *the requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted*. As such, CWMNW shall submit a CPT plan within 180 days prior to operation of the ORU-2. The CPT plan shall include initial operating parameter limits (OPLs) for both process operating parameters and waste constituents in the ORU feedstream (i.e. mercury, semi-volatile metals, low-volatile metals, and hydrogen chloride). A CPT shall be performed within 720 hours of initial operation of the unit demonstrating compliance with the MACT EEE emission limits in 40 CFR 63 §1219(b). Final OPLs shall be adopted after the CPT that assure continued compliance with these emission limits.

6.1.2 40 CFR Part 264, Subpart X Compliance

As stated above, based on EPA guidance and enforcement actions, because the ORU-2 combusts the gases derived from thermal treatment of the OBHW, the recycling process is subject to

permitting under 40 CFR 264 Subpart X and is are subject to *the requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted.*

6.2.2 40 CFR Part 264, Subpart BB Applicability and Compliance

This section incorrectly states that the operations are not subject to Subpart BB. The only material that is excluded from RCRA in this operation is the reclaimed oil, provided it meets certain enumerated restrictions as noted above. The requirement to meet Subpart BB is clearly stated below.

§261.6(d) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264, 265 or 267 of this chapter.

The section should be re-written as follows:

ORU-2 systems are subject to the requirements of 40 CFR Part 264 Subpart BB. CWMNW will develop a compliant inspection and recordkeeping plan. Results of the plan will be maintained on-site and available for inspection by ODEQ personnel.

6.2.3 40 CFR Part 264, Subpart CC Applicability

This section states that the ORU-2 is not subject to Subpart CC while performing recycling operations. That may be true for the “recycling process itself” as stated in §264.6(c)(1). However, the material receipt and preparation for “recycling” is subjected to Subpart CC, including the creation of waste piles in building B-5 as described in this same document. If material subject to either BWON or RCRA Subpart CC is managed in this feed area, it should be provided with VOC emissions control. Does building B-5 have VOC emission control. It appears to have a baghouse. Does it have activated carbon filter? Thermal oxidizer? What are the monitoring and recordkeeping requirements for those units? Carbon filtration requires breakthrough monitoring, preferably according to a plan reviewed and approved by ODEQ. Similarly for a TO. Does building B-5 have adequate ventilation control and entry doors to maintain negative pressure in the building during material movements?

This section further states that the Subpart FF “BWON” regulations apply at times to the unit, and relies on meeting Subpart CC for the tank system by simultaneously meeting BWON. This section should provide at least a general description of how that compliance is managed. For example, if emissions control is provided by the thermal oxidizer, what is done for the period of time that the TDU is not operational? Is there a backup activated carbon adsorption filter for those time periods? It is hard to expect that the tanks are emptied when the TDU and/or TO is not operational. If carbon is used, what is the monitoring and recordkeeping? Has an ODEQ reviewed monitoring plan been prepared?

Section 7 ORU-2 Controls and Monitoring

A specific section should be added to Section 7 describing the Automatic Waste Feed Cutoff System that is required by 40 C.F.R. § 63.1206(c)(3). Appropriate monitored parameters for the AWFCO on a TDU include:

- Internal pressure on the TDU primary desorption chamber, maintained to be a pressure that contains the hazardous waste during operation of the unit, most likely set to maintain a “negative draft” condition in the feed area of the “rotating cylinder” of the ATDU
- Velocity measurement on the thermal oxidizer to provide an indication of residence time to assure adequate combustion,
- Temperature measurement on the thermal oxidizer exhaust to assure adequate combustion. This is CP4 on the CWMNW unit.
- Temperature at the outlet of the condensing system.
- Oxygen concentration measurement in the TDU to prevent combustion or unsafe fires and explosions
- Additional process monitors that are required to assure continuous compliance with MACT EEE emission limits.

A continuous process monitor is required to measure the temperature at the outlet of the condensing system. Considering that the hazardous waste pollutant load on the thermal oxidizers is a strong function of the outlet temperature of the condensing systems, the AWFCO parameters should include a temperature limit for the outlet of the condensers. It is known from Raoult’s Law and the vapor pressure properties of the types of materials that CWMNW proposes to treat that the mercury concentration in the condenser effluent approximately doubles for every 18°F increase in the condenser outlet temperature. Individual condensible hydrocarbon compound vapor pressure also doubles, impacting condensing efficiency, but that is hydrocarbon compound specific. Without a limit on condenser temperature, excessive mercury can be emitted if the unit is operated at elevated condenser outlet temperatures as compared to those from the CPT. Also, increased unburned hazardous waste chemical emissions could result. The final permit limit should also be as is demonstrated in the CPT, to assure continued compliance with the emissions that are demonstrated in the CPT.

The other parameters mentioned above should be obvious as being required by an experienced operator of a TDU.

Section 7.1 Control Device Monitoring

The monitoring required by 40 CFR 61 Subpart FF “BWON” also includes leak checking by instrument “Method 21” for the containers, tanks, the waste management unit, oil water separators, closed vent system and control devices. All of the process piping on the TDU should be included in the leak checking for the Waste Management Unit. Otherwise, RCRA Subpart BB LDAR should be followed for the process piping as mandated by §261.6(d). BWON is essentially self implementing, and has extensive monitoring, testing, inspection and recordkeeping requirements.

However, ODEQ may require a demonstration of initial compliance for control devices.

Activated carbon filters require breakthrough monitoring. A brief summary of those requirements should be included in this section.

Section 7.3 Other Equipment Monitoring

This section incorrectly states that the ORU-2 is not subject to Subpart BB while performing recycling of oil bearing wastes. Refer to comments above in Section 6.2.2.

COMMENTS ON CWMNW RCRA PERMIT

Additional specific comments on the actual permit documents, including the facility WAP, will be provide when those documents are made available for review.

EXHIBIT 1

A - Letter dated October 3, 2015 from JD Head to USEPA Region 6

B - Letter dated May 2, 2016 from USEPA Region 6 to JD Head

C - Letter dated June 24, 2016 from USEPA Region 6 to Estuardo Silva LDEQ



FRTZ, BYRNE, HEAD & FITZPATRICK, PLLC

Attorneys at Law

October 30, 2015

Mr. John Blevins
Compliance Assurance & Enforcement Division
Division Director 6EN
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

SUBJECT: Hazardous Waste Regulatory Standards for Thermal Desorption Units at TSDFs

Dear Mr. Blevins:

Thermal desorption units (TDUs) are broadly used to treat hazardous waste and hazardous secondary materials. The application of thermal desorption technology within a recycling or reclamation process has been reviewed by Region 6 in multiple enforcement cases. The resulting allegations and consent agreements have established EPA's regulatory position. This letter presents my understanding of EPA's position on certain regulatory and technical requirements for TDUs that are installed at a RCRA treatment storage and disposal facility (TSDF).

A TDU is a thermal treatment device that heats solid material to vaporize, remove, and separate organic constituent materials from the solids. The solids are discharged with little or no residual organic contaminants. In the embodiment that is the subject of this letter, the separated organic constituents are condensed and recovered as a liquid. The TDU process characteristically generates a vent gas after the condensing system. When high organic content material is processed in the TDU it is quite common for the unit to combust the vent gas as an effective means of air pollution control. It is the regulatory applicability related to the combustion of all or a portion of the vent gas that I am seeking clarification.

TDUs at RCRA TSDFs.

One application of thermal desorption technology is to commercially reclaim oil from various generators of oil bearing hazardous waste. These hazardous wastes are generated by petroleum refining, production and transportation practices, and are typically listed as either K048, K049,

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K050, K051, K052, K169, K170, K171, K172, F037 or F038, or may be hazardous by characteristic (i.e. "D" coded). If the hazardous waste recycled in the TDU comes exclusively from the above sources, the oil reclaimed from the TDU may be burned as a non-hazardous fuel if it meets the Used Oil Specification (UOS) at § 279.11, as per 40 CFR § 261.6(a)(3)(iv)(C). If the oil does not meet the UOS, it would remain a listed waste and require disposal at an appropriately permitted and operated facility, such as a Part 266 "BIF" or a Part 264 Subpart O incinerator. The generator will manifest and ship oil bearing hazardous waste to the commercial facility for treatment and/or reclamation. Based on two focused enforcement actions in EPA Region 6 since 2008, it appears EPA has concluded the following findings and regulatory requirements apply to commercial TDUs receiving offsite RCRA hazardous waste for treatment or reclamation.

1. For a TDU that combusts all or a portion of the vent gas, combustion of the TDU vent gas from RCRA hazardous waste or recyclable RCRA regulated materials is considered thermal treatment that is regulated by RCRA.
2. Thermal treatment of the vent gas requires a RCRA permit, 40 CFR Part 264 Subpart X or Subpart O, and a RCRA permit under one of these Subparts is required even if the facility is operating as a RCRA exempt recycling activity.
3. For TDUs with vent gas combustion processes that are permitted under RCRA Subpart X, the RCRA permitting authority should include in the permit application and final permit appropriate conditions from RCRA Subparts I through O, AA, BB and CC, and also include appropriate conditions from Part 63 Subpart EEE (i.e. the MACT "EEE").
4. The TDU must have an automatic waste feed cutoff system and establish appropriate operating parameter limits (OPLs) prior to initial operation to assure continued compliance with all emissions limits.
5. Minimum appropriate conditions from the MACT "EEE" include compliance with emission limits for particulate matter, hydrochloric acid, volatile metals (Hg), semivolatile metals, low volatile metals, destruction and removal efficiency, carbon monoxide, total hydrocarbons, and dioxins.
6. A compliance demonstration test (Trial Burn) is required to establish that the emissions from the combustion of the vent gas meet the emissions limits that were determined appropriate for the unit, including MACT "EEE."
7. Final OPLs shall be derived from demonstrated test conditions and established as permit requirements for the continued operation of the TDU.
8. Failure to demonstrate compliance with emissions limits requires shutdown of the TDU on RCRA regulated waste materials until corrective measures and re-demonstration can be implemented.

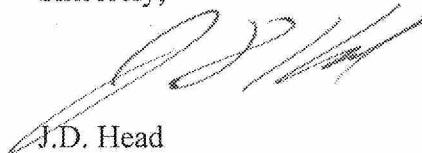
Please confirm that each of these enumerated statements accurately reflect EPA's regulatory conclusions for the management of commercial TDUs that combust vent gases generated from receiving offsite hazardous waste for treatment or reclamation at a TSDF.

Your support in clarifying these matters is most appreciated. My client intends to construct and install one or more TDUs in Region 6 that may be located at a TSDF and desires regulatory certainty on the issues discussed herein.

Mr. John Blevins
Regulatory Standards

October 30, 2015
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read 'J.D. Head', written over a horizontal line.

J.D. Head

Fritz, Byrne, Head & Fitzpatrick, PLLC
221 W. 6th Street, Suite 960
Austin, Texas 78701
(512) 476-2020 telephone
jdhead@fbhf.com



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 Ross Avenue
Dallas, Texas 75202-2733

2 MAY 2016

Mr. J.D. Head
Fritz, Byrne, Head & Fitzpatrick, PLLC
221 West 6th Street
Suite 960
Austin, Texas 78701

Dear Mr. Head:

Thank you for your October 30, 2015 letter requesting clarification of the hazardous waste regulatory standards for thermal desorption units (TDUs) installed at RCRA treatment, storage, and disposal facilities (TSDFs). I apologize for the delay in responding to your request. In your scenario, the TDU reclaims oil from oil bearing hazardous wastes generated by petroleum refining, production, or transportation practices. You describe a TDU as a device that heats solid material to vaporize, remove, and separate organic constituent materials from solids. In the scenario you describe at a TSDF, the separated organic constituents are typically condensed and recovered as a liquid oil. The TDU process also generates a vent gas after the condensing stream.

Your inquiry also references 40 C.F.R. § 261.6(a)(3)(iv)(C)¹, which provides that:

Oil reclaimed from oil-bearing hazardous waste from petroleum refining, production, or transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the used oil specification under 40 C.F.R. § 279.11 is not subject to regulation under 40 C.F.R. Parts 262 – 268, 270, or 40 C.F.R. Part 124, and is not subject to the notification requirements of Section 3010 of RCRA.

If the above conditions are met, then the reclaimed oil can be burned as a non-hazardous fuel. If the oil-bearing hazardous waste is not from petroleum refining, production, or transportation practices, then the reclaimed oil is subject to RCRA regulation.

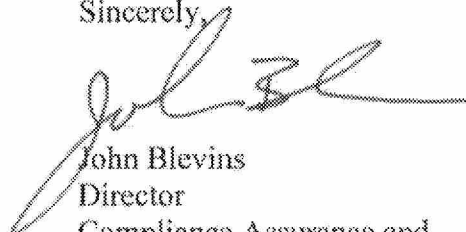
If a TDU combusts all or a portion of the vent gas, combustion of the TDU vent gas from RCRA hazardous waste or recyclable materials [40 C.F.R. § 261.6(a)(1)] is considered thermal treatment that is regulated by RCRA. The material being treated (oil-bearing hazardous waste) is already a hazardous waste. Heating hazardous wastes to a gaseous state is subject to regulation under RCRA as treatment of hazardous waste, and thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA. 54 Fed. Reg. 50968, 50973 (December 11, 1989). Thus, thermal treatment of the vent gas requires a RCRA permit.

¹ Since you did not reference a specific State in which your client may operate a TDU, this letter cites to the applicable federal regulations. If the State has an authorized RCRA program, the corresponding state regulation would be applicable.

If the vent gas is combusted in the combustion chamber of the TDU, then a permit under 40 C.F.R. Part 264, Subpart O is required, because the TDU would meet the definition of incinerator in 40 C.F.R. § 260.10 (an enclosed device that uses controlled flame combustion). If, on the other hand, the vent gas is vented to and combusted in a thermal oxidizing unit (TOU), the permitting authority may be able to permit the entire unit (TDU and TOU) as a miscellaneous unit under 40 C.F.R. Part 264, Subpart X. A RCRA permit would be required even if the facility is operating as a RCRA exempt recycling activity under 40 C.F.R. § 261.6(a)(3)(iv)(C). If the permitting authority decides to issue a 40 C.F.R. Part 264, Subpart X permit, the permitting authority is required to include in the permit requirements from 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146 that are appropriate for the miscellaneous unit being permitted as required in 40 C.F.R. § 264.601. The decisions as to what appropriate requirements would be included in the permit would be left to the permitting authority. However, EPA would expect that the permit conditions would be similar to those set forth in the enclosed Consent Agreement and Final Order, In Re: US Ecology Texas, Inc. and TD*X Associates, LP, EPA Docket Nos. RCRA-06-2012-0936 and RCRA-06-2012-0937, filed October 4, 2012.

If you have any questions, please feel free to contact Guy Tidmore of my staff at (214) 665-3142 or via e-mail at tidmore.guy@epa.gov.

Sincerely,



John Blevins
Director
Compliance Assurance and
Enforcement Division

Enclosure

Cc: Penny Wilson, ADEQ
Lourdes Iturralde, LDEQ
John Kieling, NMED
Mike Stickney, ODEQ
James Gradney, TCEQ

3. For the purposes of this proceeding, the Respondents admit the jurisdictional allegations contained herein; however, the Respondents neither admit nor deny the specific factual allegations contained in this CAFO.

4. The Respondents explicitly waive any right to contest the allegations and their right to appeal the proposed Final Order set forth therein, and waive all defenses which have been raised or could have been raised to the claims set forth in the CAFO.

5. Compliance with all the terms and conditions of this CAFO shall resolve only those violations which are set forth herein.

6. The Respondents consent to the issuance of the CAFO hereinafter recited and consent to the issuance of the Compliance Order contained therein.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

A. PRELIMINARY ALLEGATIONS

7. US Ecology Texas, Inc. (USET) is a corporation incorporated under the laws of the State of Delaware and authorized to do business in the State of Texas.

8. TD*X Associates LP (TD*X) is a limited partnership authorized to do business in the State of Texas.

9. "Person" is defined in 30 T.A.C. § 3.2(25) [40 C.F.R. §§ 260.10 and 270.2], and Section 1004(5) of RCRA, 42 U.S.C. § 6903(15) as "an individual, corporation, organization, government or government subdivision or agency, business trust, partnership, association, or any other legal entity."

10. The Respondent USET is a "person" as defined by 30 T.A.C. § 3.2 (25) [40 C.F.R. § 260.10], and Section 1004 (15) of RCRA, 42 U.S.C. § 6903(15).

11. The Respondent TD*X is a “person” as defined by 30 T.A.C. § 3.2 (25) [40 C.F.R. § 260.10], and Section 1004 (15) of RCRA, 42 U.S.C. § 6903 (15).

12. “Owner” is defined in 30 T.A.C. § 335.1(108) [40 C.F.R. § 260.10] as “the person who owns a facility or part of a facility.”

13. “Operator” is defined in 30 T.A.C. § 335.1(107) [40 C.F.R. § 260.10] as “the person responsible for the overall operation of a facility”.

14. “Owner or operator” is defined in 40 C.F.R. § 270.2 as “the owner or operator of any facility or activity subject to regulation under RCRA.”

15. “Facility” is defined in 30 T.A.C. § 335.1(59) [40 C.F.R. § 260.10] as meaning “all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of municipal hazardous waste or industrial solid waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).”

16. The Respondent USET owns and operates a hazardous waste treatment, storage, and disposal (TSD) facility located at 3327 County Road 69, Robstown, TX 78380, EPA I.D. No. TXD069452340, Permit No. HW-50052-001.

17. The TSD identified in Paragraph 16 is a “facility” as that term is defined in 30 T.A.C. § 335.1(59) [40 C.F.R. § 260.10].

18. The Respondent USET is the “owner” and/or “operator” of the facility identified in Paragraph 16, as those terms are defined in 30 TAC § 335.1(107) & (108) [40 C.F.R. § 260.10] and 40 C.F.R. § 270.2.

19. An oil reclamation unit is located at the facility identified in Paragraph 16.

20. The Respondent TD*X owns and operates a thermal desorption unit (TDU), as well as the feed preparation system that includes a shaker tank (T-30), three mix tanks (T-31, T-32, and T-33), a centrifuge, and a surge tank (T-34) at the oil reclamation unit.

21. The Respondent TD*X began operating the TDU and related equipment on or about June 15, 2008.

22. On or about June 8 – 11, 2010, June 14 – 17, 2010, and August 9 – 11, 2010, the Respondent USET's TSD facility and the oil reclamation unit were inspected by representatives of EPA pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927.

B. VIOLATIONS

Count One – Processing Hazardous Waste Without a Permit or Interim Status

23. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment),¹ storage, or disposal of hazardous waste.

24. “Hazardous waste” is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as “any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*”

25. “Recyclable materials” is defined in 30 T.A.C. §335.24(a) [40 C.F.R. § 261.6(a)(1)] as “hazardous wastes that are recycled”.

¹ The Texas Administrative Code uses the term “processing” instead of “treatment”. The term “processing” as used by Texas is essentially equivalent to the term “treatment” as used in the federal statute and regulations.

26. The Respondent USET receives “hazardous waste” from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

27. The Respondent USET receives “recyclable materials” from off-site generators, as that term is defined by 30 T.A.C. § 335.24(a) [40 C.F.R. § 261.6(a)(1)].

28. Recyclable materials destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

29. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

30. On various dates after June 15, 2008, certain recyclable materials were processed in the tanks identified in Paragraph 20.

31. The recyclable materials identified in Paragraph 30 did not meet the exemption in 30 T.A.C. § 335.24(c)(4)(C) [40 C.F.R. § 261.6(a)(3)(iv)(C) because the hazardous wastes were not “oil-bearing hazardous wastes from petroleum refining, production, and transportation practices.”

32. The Respondent TD*X processed (treated) hazardous waste as that term is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] in the tanks identified in Paragraph 20.

33. To date, neither the Respondent USED nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the processing (treatment) of hazardous waste in the tanks identified in Paragraph 20.

34. Therefore, the Respondent USET and the Respondent TD*X have violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by processing (treating) hazardous waste without a RCRA permit or interim status.

Count Two – Processing Hazardous Waste Without a Permit or Interim Status

35. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

36. “Hazardous waste” is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as “any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*”

37. “Recyclable materials” is defined in 30 T.A.C. §335.24(a) [40 C.F.R. § 261.6(a)(1)] as “hazardous wastes that are recycled”.

38. The Respondent USET receives “hazardous waste” from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

39. The Respondent USET receives “recyclable materials” from off-site generators, as that term is defined by 30 T.A.C. § 335.24(a) [40 C.F.R. § 261.6(a)(1)].

40. Recyclable materials destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

41. On various dates after June 15, 2008, certain recyclable materials were fed into the TDU that did not meet the exemption in 30 T.A.C. § 335.24(c)(4)(C) [40 C.F.R. § 261.6(a)(3)(iv)(C) because the hazardous wastes were not “oil-bearing hazardous wastes from petroleum refining, production, and transportation practices.”

42. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

43. Thermal processing (thermal treatment) is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10] as follows:

the processing of solid waste or hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the solid waste or hazardous waste. Examples of thermal processing are incineration, molten salt, pyrolysis, calcination, wet air

oxidation, and microwave discharge. (See also “incinerator” and “open burning.”).

44. The TDU uses heat from an indirect heated rotary dryer to separate the organic constituents from the hazardous waste feed material. A nitrogen carrier gas is used to transfer the vapor phase organic constituents to a gas treatment system. The oil is recovered by condensing vapor phase organic constituents in the gas treatment system. A portion of the TDU’s recirculating nitrogen carrier gas, along with non-condensable gases, is vented, filtered, and then injected into the combustion chamber of the TDU, where it is burned.

45. The separation of the organic constituents from the hazardous waste in the TDU’s indirectly heated rotary dryer constitutes thermal processing (thermal treatment) as that term is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10].

46. To date, neither the Respondent USET nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the thermal processing (thermal treatment) of hazardous waste in the TDU.

47. Therefore, the Respondent USET and the Respondent TD*X have violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by thermally processing (thermally treating) hazardous waste without a RCRA permit or interim status.

Count Three - Processing Hazardous Waste Without a Permit or Interim Status

48. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

49. “Hazardous waste” is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as “any solid waste identified or listed as a hazardous waste by the administrator of the United States

Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*”

50. The Respondent USET receives “hazardous waste” from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

51. Hazardous wastes destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

52. On various dates after June 15, 2008, hazardous wastes were fed into the TDU.

53. The TDU uses heat from an indirect heated rotary dryer to separate the organic constituents from the hazardous waste feed material. A nitrogen carrier gas is used to transfer the vapor phase organic constituents to a gas treatment system. The oil is recovered by condensing vapor phase organic constituents in the gas treatment system. A portion of the TDU’s recirculating nitrogen carrier gas, along with non-condensable gases, is vented, filtered, and then injected into the combustion chamber of the TDU, where it is burned.

54. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in

accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

55. Thermal processing (thermal treatment) is defined in 30 T.A.C. § 335.1(149)

[40 C.F.R. § 260.10] as follows:

the processing of solid waste or hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the solid waste or hazardous waste. Examples of thermal processing are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also “incinerator” and “open burning.”)

56. The burning of gases in the TDU’s combustion chamber constitutes thermal processing (thermal treatment) as that term is defined in 30 T.A.C. § 335.1(149)

[40 C.F.R. § 260.10].

57. The combustion chamber of the TDU is an enclosed device that uses controlled flame combustion.

58. The combustion chamber of the TDU does not meet the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; nor meets the definition of infrared incinerator or plasma arc incinerator.”

59. To date, neither the Respondent USET nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the thermal processing (thermal treatment) of hazardous waste in the combustion chamber of the TDU.

60. Therefore, the Respondent USET and the Respondent TD*X have violated and continue to violate Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e) and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by thermally processing (thermally treating) hazardous waste without a RCRA permit or interim status.

Count Four – Storing Hazardous Waste Without a Permit Or Interim Status

61. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

62. “Storage” is defined in 30 T.A.C. § 335.1(143) [40 C.F.R. § 260.10] as “the holding of solid waste for a temporary period, at the end of which the waste is processed, disposed of, recycled, or stored elsewhere.”

63. Between on or about March 9, 2010, and June 11, 2010, the Respondent USET stored roll-off boxes in the area called the “Y” at the facility.

64. The roll-off boxes identified in Paragraph 63 contained material which had entered the oil reclamation process and was being temporarily staged before undergoing subsequent stages of the reclamation process. The Respondent USET discontinued the use of the area called the “Y” for this purpose.

65. “Hazardous waste” is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as “any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*”

66. The roll-off boxes identified in Paragraph 63 contained “hazardous waste” as that term is defined in T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

67. The Respondent USET had not applied for nor received a RCRA permit or interim status to allow the storage of hazardous waste at the area called the “Y”.

68. Therefore, the Respondent USET has violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by storing hazardous waste without a RCRA permit or interim status.

III. COMPLIANCE ORDER

69. Pursuant to Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), the Respondents are hereby **ORDERED** to take the following actions and provide evidence of compliance within the time period specified below:

A. Interim Operating Requirements

1. As of the effective date of this CAFO, feedstock for the oil reclamation unit shall consist only of non-hazardous waste, and oil-bearing hazardous waste from petroleum refining, production, and transportation practices. Oil-bearing hazardous waste from petroleum refining, production, or transportation practices includes the following listed hazardous waste from specific Petroleum Refining Sources (K049, K050, K051, K052, K169, and K170). Also acceptable is oil-bearing hazardous waste from processes which meet the definition of the following Standard Industrial Classification (SIC) codes and corresponding North American Industry Classification System (NAICS) codes (i.e., petroleum refining, production, and transportation practices) as follows:

SIC Code	SIC Description	NAICS Code	NAICS Title
1311	Crude Petroleum & Natural Gas	211111	Crude Petroleum and Natural Gas Extraction
1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction
1381	Drilling Oil & Gas Wells	213111	Drilling Oil and Gas Wells
1382	Oil & Gas Field Exploration Services (except geophysical mapping & surveying)	213112	Support Activities for Oil & Gas Operations
1389	Oil and Gas Field Services, NEC (except construction of field gathering lines, site	213112	Support Activities for Oil and Gas Operations

	preparation and related construction activities performed on a contract or fee basis)		
2911	Petroleum Refining	324110	Petroleum Refineries
4612	Crude Petroleum Pipelines	486110	Pipeline Transportation of Crude Oil
4613	Refined Petroleum Pipelines	486910	Pipeline Transportation of Refined Petroleum Products
4789	Transportation Services, NEC (pipeline terminals and stockyards for transportation)	488999	All Other Support Activities for Transportation
4922	Natural Gas Transmission	486210	Pipeline Transportation of Natural Gas
4923	Natural Gas Transmission and Distribution (distribution)	221210	Natural Gas Distribution
4923	Natural Gas Transmission and Distribution (transmission)	486210	Pipeline Transportation of Natural Gas
5171	Petroleum Bulk Stations and Terminals (except petroleum sold via retail method)	488999	All Other Support Activities for Transportation
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals (merchant wholesalers)	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)

2. Using feedstock from processes meeting the definition of the aforementioned SIC/NAICS Codes does not constitute compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C) or this CAFO. The Respondents are required to make a separate determination whether the hazardous waste in question is “oil-bearing,” and that the hazardous waste was originally generated from petroleum refining, production, or transportation practices.

3. As of the effective date of this CAFO, when the dryer feed is on, the Respondents shall operate the TDU in accordance with the interim operating parameters set forth in Appendix 1, Table A, which is attached and incorporated by reference into this CAFO. The Blending Protocols referenced in Appendix 1 is attached as Appendix 2, and incorporated by reference into this CAFO.

4. As of the effective date of this CAFO, Respondents shall comply with the Start-Up, Shutdown, and Malfunction Plan (SSM Plan) (CDT Plan, Appendix E). The Compliance Demonstration Test (CDT) Plan is attached as Appendix 3 and incorporated by reference into the CAFO.

5. Within sixty (60) days of the effective date of this CAFO, the Respondents shall conduct a tune-up of the external combustion chamber of the TDU in accordance with the following requirements:

a. As applicable, inspect the burner and clean or replace any components of the burner as necessary. The burner inspection may be delayed until the next scheduled or unscheduled unit shutdown.

b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specification.

c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.

d. Optimize total emissions of carbon monoxide (CO). This optimization should be consistent with the manufacturer's specifications, if available.

e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made.

Measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made.

f. Perform sampling and analysis of both dryer furnace stacks using Method TO-15, "Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)". If the total

organic matter result is greater than 10 ppmV for either stack, the analysis shall include speciation of the gas. This information shall be included in the report required in Paragraph 69.A.5.g below.

g. Maintain on-site a report documenting the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume present, measured before and after the adjustments of the external combustion chamber of the TDU, and a description of any corrective actions taken as part of the combustion adjustment.

h. Subsequent tune-ups shall be conducted annually until the TDU is reconfigured.

6. Within sixty (60) days of the effective date of this CAFO, the Respondents shall conduct a fuel specification analysis of the purge vent gas for mercury and document that it does not exceed the maximum concentration of 40 micrograms/cubic meter of mercury using test methods ASTM D5954, ASTM D6350, ISO 6978-1:2003(E), or ISO 6978-2:2003(E), or an alternate test method approved by EPA. If the concentration of mercury exceeds 40 micrograms/cubic meter, the Respondents shall immediately notify EPA.

7. Within ninety (90) days of the effective date of this CAFO, the Respondents shall install, monitor, and operate an automatic hazardous waste feed cutoff (AWFCO) at the TDU in accordance with 40 C.F.R. § 63.1206(c)(3)(ii) and (iv) that immediately and automatically cuts off the hazardous waste feed when any component of the AWFCO system fails, or when one or more of the interim operating parameters set forth in Appendix 1, Table A that are designated as AWFCO parameters are not met. The Respondents shall also comply with the investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3)(v), (vi) and (vii).

8. Within one year of the effective date of this CAFO, the Respondents shall reconfigure the TDU so that the non-condensable vent gases are routed to a thermal oxidizing unit (TOU)

instead of the combustion chamber of the TDU (Reconfigured TDU). After reconfiguration, fuel for the TDU is limited to natural gas and propane.

9. The Respondents shall operate the Reconfigured TDU during the shakedown period in accordance with the operating parameters limits set forth in Appendix 1, Table B when the dryer feed is on. The Respondent shall not operate the Reconfigured TDU more than 720 hours (including the shakedown period and the Compliance Demonstration Test). The Respondents shall keep records of the hours of operation during the shakedown period. The Respondents shall operate a continuous emissions monitor system (CEMS) for carbon monoxide (CO) for the TOU during the shakedown period. The Respondents shall operate the Reconfigured TOU in a manner that the hourly rolling averages for CO are not exceeded. The rolling averages shall be calculated in accordance with 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

10. During the shakedown period, the Respondents shall monitor and operate an automatic hazardous waste feed cutoff (AWFCO) at the Reconfigured TDU in accordance with 40 C.F.R. § 63.1206(c)(ii) and (iv) that immediately and automatically cuts off the hazardous waste feed when any component of the AWFCO system fails, or when one or more of the operating parameter limits set forth in Appendix 1, Table B that are designated as AWFCO parameters are not met. The Respondents shall also comply with the investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3) (v), (vi) and (vii).

11. The Respondents shall conduct a test measuring the concentration of CO in the exhaust gases from the TOU. This test shall include three one-hour runs during which the TDU is operated on oil-bearing hazardous waste. The emissions from the TOU stack shall be monitored for carbon monoxide and oxygen using EPA Method 10. The emissions shall be

demonstrated to be less than 100 ppmV CO corrected to 7% O₂ in each run. The test frequency shall be once during each six-month period, January 1 – June 30 and July 1 - December 31, said time period to commence after conducting the CDT and continuing until the TCEQ issues a RCRA Subpart X permit for the Reconfigured TDU. Within forty-five (45) days after conducting the test, the Respondents shall submit a test report to EPA summarizing the test results. The time periods for conducting the test may be changed to once during each twelve (12) month calendar period, January 1 - December 31, if the Respondents submit to EPA, with a copy to TCEQ, a detailed feed stream analysis plan that characterizes the waste received by the facility, and EPA approves the plan. The detailed feedstream analysis plan shall be prepared in accordance with 40 C.F.R. § 264.13 and the EPA Guidance Document “Waste Analysis At Facilities That Generate, Treat, Store, And Dispose of Hazardous Waste”, OSWER 9938.4-03 (April 1994). The Respondents will implement the detailed feedstream analysis plan, as approved or modified by EPA, immediately upon receipt of EPA’s approval.

12. The Respondents shall prepare a report for the time period beginning on the effective date of this CAFO and ending June 30, 2013, and every six (6) months thereafter. The report shall be submitted to EPA, with a copy to TCEQ, within thirty (30) days of the end of the reporting period. The report shall include the following:

a. For each waste stream accepted by the oil reclamation unit, identify the customer, original generator, waste stream description, RCRA waste codes, the SIC or NAICS code of the process generating the waste, a summary of any analyses conducted by the Respondents to verify the waste stream profiles, and the total volume of waste accepted during the reporting period. If requested by EPA, the Respondents shall provide copies of relevant waste approval documents and manifests for the specific waste streams.

b. All time periods in which there were exceedances of the operating parameters and the AWFCO requirements set forth in Appendix 1, Tables A and B, and exceedances of the hourly rolling averages for CO (Paragraph 69.A.9).

c. All exceedances of the Reconfigured TDU Compliance Standards and the AWFCO requirements established in accordance with Paragraph 69.C.9.

d. The initial Report shall include documentation showing that the tune-up and fuel specification analysis required by Paragraphs 69.A.5 and 69.A.6 have been conducted, and provide documentation showing the date of installation and subsequent operation of the AWFCO system required by Paragraphs 69.A.7.

e. Documentation showing the installation of the TOU required by Paragraph 69.A.8, and the additional AWFCO requirements required by Appendix 1, Table B (Paragraph 69.A.10).

The Report may be submitted in an electronic format (i.e., compact disk). The Respondents may claim the report as confidential business information (CBI), in accordance with the requirements of 40 C.F.R. Part 2. However, information that is emissions data or a standard or limitation cannot be claimed as CBI. 40 C.F.R. § 2.301(e). If the Report contains any information that is claimed CBI, the Respondents shall provide a redacted version with all CBI deleted.

B. RCRA Permit Modification

1. Within one year of the effective date of this CAFO, the Respondents shall submit to TCEQ, with a copy to EPA, an application for a Class 3 RCRA Permit Modification to permit the Reconfigured TDU as a miscellaneous unit under 40 C.F.R. Part 264, Subpart X in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33].

2. The permit application shall also include relevant requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, 40 C.F.R. Part 270, and 40 C.F.R. Part 63, Subpart EEE that are appropriate for the operation of the Reconfigured TDU, including an engineering report, waste analysis, monitoring and inspection requirements, and closure requirements set forth in 30 T.A.C. § 335.152(a)(13) [40 C.F.R. §§ 264.341, 264.347, and 264.351].

3. The Respondents shall also request that the issued RCRA permit modification include the following:

- a. The feedstock limitations applicable to the operation of the oil reclamation unit under 40 C.F.R. § 261.6(a)(3)(iv)(C) set forth in Paragraph 69.D;
- b. The investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3) (v), (vi) and (vii);
- c. Appropriate recordkeeping and reporting requirements; and
- d. Any applicable risk-based terms and conditions necessary to protect human health and the environment.

4. The failure to timely submit a Class 3 Permit Modification to TCEQ and EPA within the deadline set forth in Paragraph 69.B.1 shall result in the termination of the Respondents' authorization to operate the Reconfigured TDU on that date unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

5. By no later than three and one-half years (42 months) from the effective date of this CAFO, the Respondents must complete all permitting requirements and obtain issuance from the TCEQ of a final RCRA Subpart X permit for the TDU as a Subpart X – Miscellaneous Unit in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33], and which

incorporates the appropriate requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, 40 C.F.R. Part 270, and 40 C.F.R. Part 63, Subpart EEE. In the event that TCEQ does not issue a RCRA Subpart X permit for the Reconfigured TDU as described above by the above deadline, the Respondents' authorization to operate the Reconfigured TDU terminates on that date, unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

C. Compliance Demonstration Test

1. The Respondents shall perform a compliance demonstration test (CDT) in accordance with the approved CDT Plan, which is attached as Appendix C and incorporated by reference into the CAFO. The CDT requires the Respondents to demonstrate compliance with the emissions limits of 40 C.F.R. § 63.1219(b) set forth in Paragraph C.5, the destruction and removal efficiency standard of 40 C.F.R. § 63.1219(c)(1) set forth in Paragraph C.4, and establish limits for the operating parameters set forth in Paragraph 69.C.6 (Appendix 1, Table C).

2. Within sixty (60) days of the effective date of this CAFO, the Respondents shall submit to EPA for approval, with a copy to TCEQ, a Quality Assurance Project Plan (QAPP) for the CDT. The QAPP shall be prepared in accordance with the EPA Region 6 Guidance "Quick Reference Guide, Test Burn Program Planning for Hazardous Waste Combustion (HWC) Units" dated August 6, 2012. The Respondents shall implement the QAPP as approved or modified by EPA.

3. The Respondents shall implement the CDT in accordance with Appendix 3 within ninety (90) days after reconfiguration of the TDU pursuant to Paragraph 69.A.8 of this CAFO.

4. During the CDT, the Respondents must achieve a destruction and removal efficiency (DRE) of 99.99% for toluene, the designated principle organic hazardous constituent (POHC). The DRE shall be calculated in accordance with 40 C.F.R. § 63.1219(c)(1).

5. The emission limits that must be met during the CDT are set forth in 40 C.F.R. § 63.1219(b).

6. The operating parameters limits that will be established during the CDT are set forth in Appendix 1, Table C.

7. The Respondents must not exceed the emission limits set forth in 40 C.F.R. § 63.1219(b), and must achieve a DRE of 99.99% for toluene [as set forth in 40 C.F.R. § 63.1219(c)] for all three runs in order to have a successful CDT. If the Respondents determine, based on the results of analyses of stack samples, that they have exceeded any emission standard or failed to meet the DRE requirement during any of the three runs, they must immediately cease processing hazardous waste in the Reconfigured TDU. The Respondents must make this determination within forty-five (45) days following completion of the CDT. The Respondents may not resume operation of the Reconfigured TDU until the Respondents have submitted and received EPA approval of a revised CDT plan, at which time operations can resume to demonstrate compliance with the emission limits and DRE requirements during all of the three runs.

8. All analyses required by the CDT plan shall be performed by a NELAC accredited laboratory or by a laboratory pre-approved by TCEQ.

9. Within ninety (90) days from completion of the CDT, the Respondents shall submit a CDT Report to EPA and TCEQ prepared in accordance with requirements in the CDT Plan, documenting compliance with the DRE standard and emission limits set forth in Paragraphs 69.C.4 and 69.C.5, and identifying operating parameter limits and AWFCO settings for the parameters set forth in Appendix 1, Table C. The DRE standard, emission limits, operating parameter limits, and the AWFCO settings shall also be set forth in a separate Appendix entitled

“Reconfigured TDU Compliance Standards”. All data collected during the CDT (including, but not limited to, field logs, chain-of-custody documentation, monitoring data, sampling and analytical results, and any other data or calculations supporting the emissions calculations or operating parameter limits) must be submitted to EPA and TCEQ as part of the CDT Report. However, information in the CDT Report that is emissions data or a standard or limitation cannot be claimed as CBI. 40 C.F.R. § 2.301(e). If the Report contains any information that is claimed CBI, the Respondents shall provide a redacted version with all CBI deleted.

10. As of the date of the submission of the CDT Report, the Respondent shall comply with all operating requirements set forth in the “Reconfigured TDU Compliance Standards”, unless otherwise notified by EPA.

11. EPA will review the CDT Report. EPA will make a finding concerning compliance with the emissions standards, DRE requirements, and other requirements of the CDT. If EPA determines that the Respondents have met all the requirements, it shall issue a Finding of Compliance to the Respondents. If EPA determines that the Respondents did not meet all of the requirements, it shall issue a Finding of Non-Compliance. Subject to Paragraph 69.C.7 of this CAFO, the issuance of a Finding of Non-Compliance by EPA shall result in the termination of the Respondents’ authorization to operate the Reconfigured TDU on that date.

12. The failure to timely submit a CDT Report to EPA and TCEQ within ninety (90) days from completion of the CDT shall result in the termination of the Respondents’ authorization to operate the Reconfigured TDU on that date, unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

D. Compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C)

1. Unless the TDU and the tanks identified in Paragraph 20 are authorized by the RCRA Permit Modification required by Section III.B of this CAFO (or any subsequent permit amendment) to receive wastes that do not meet the requirements set forth in 40 C.F.R. § 261.6(a)(3)(iv)(C), feedstock for the oil reclamation unit shall consist only of non-hazardous waste, and oil-bearing hazardous waste from petroleum refining, production, and transportation practices. Oil-bearing hazardous waste from petroleum refining, production, or transportation practices includes the following listed hazardous waste from specific Petroleum Refining Sources (K049, K050, K051, K052, K169, and K170). Also acceptable is oil-bearing hazardous waste from processes which meet the definition of the following Standard Industrial Classification (SIC) codes and corresponding North American Industry Classification System (NAICS) codes (i.e., petroleum refining, production, and transportation practices) as follows:

SIC Code	SIC Description	NAICS Code	NAICS Title
1311	Crude Petroleum & Natural Gas	211111	Crude Petroleum and Natural Gas Extraction
1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction
1381	Drilling Oil & Gas Wells	213111	Drilling Oil and Gas Wells
1382	Oil & Gas Field Exploration Services (except geophysical mapping & surveying)	213112	Support Activities for Oil & Gas Operations
1389	Oil and Gas Field Services, NEC (except construction of field gathering lines, site preparation and related construction activities performed on a contract or fee basis)	213112	Support Activities for Oil and Gas Operations
2911	Petroleum Refining	324110	Petroleum Refineries
4612	Crude Petroleum Pipelines	486110	Pipeline Transportation of Crude Oil
4613	Refined Petroleum Pipelines	486910	Pipeline Transportation of Refined Petroleum Products

4789	Transportation Services, NEC (pipeline terminals and stockyards for transportation)	488999	All Other Support Activities for Transportation
4922	Natural Gas Transmission	486210	Pipeline Transportation of Natural Gas
4923	Natural Gas Transmission and Distribution (distribution)	221210	Natural Gas Distribution
4923	Natural Gas Transmission and Distribution (transmission)	486210	Pipeline Transportation of Natural Gas
5171	Petroleum Bulk Stations and Terminals (except petroleum sold via retail method)	488999	All Other Support Activities for Transportation
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals (merchant wholesalers)	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)

Nothing in this Section III.D shall be construed to preclude Respondents from seeking authorization from the TCEQ to process oil-bearing materials outside the scope of 40 C.F.R. § 261.6(a)(3)(iv)(C). However, the definition of oil-bearing hazardous waste from petroleum refining, production, or transportation practices set forth in this Paragraph shall remain the same.

2. Using feedstock from processes meeting the definition of the aforementioned SIC/NAICS Codes does not constitute compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C) or this CAFO. The Respondents are required to make a separate determination whether the hazardous waste in question is “oil-bearing,” and that the hazardous waste was originally generated from petroleum refining, production, or transportation practices. The Respondents shall request that this provision be placed in the issued RCRA permit as applicable to the oil reclamation unit operation under 40 C.F.R. § 261.6(a)(3)(iv)(C).

E. TCEQ Submission, Revision, and Approval Process

1. For the Class 3 RCRA Permit Modification required be submitted to TCEQ for approval under this CAFO, TCEQ will review the application in accordance with 30 T.A.C.

§§ 281.3(c), 281.18 and 281.19(a) and (b). The Respondents must respond to any Notice of Deficiency (NOD), with a copy to EPA, within the time period specified by the TCEQ. In the event that the Respondents fail to submit a timely and complete NOD response, the Respondents' authorization to operate the TDU shall terminate on the NOD response deadline unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

F. Additional Conditions

1. To comply with this CAFO, the Respondents must obtain a RCRA permit for the TDU as a Subpart X – Miscellaneous Unit in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33], and which incorporates the appropriate requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, and 40 C.F.R. Part 270, and 40 C.F.R. Part 63, Subpart EEE.

2. The Respondents may seek relief under the provisions of Section IV.F of this CAFO (Force Majeure) for any delay in the performance of any such obligations resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if the Respondent has submitted a timely and complete application and has taken all other actions necessary to obtain such permit or approval.

G. EPA Review and Comment on RCRA Permit

1. Nothing in this CAFO shall limit EPA's rights under applicable environmental laws or regulations, including, but not limited to, Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), 40 C.F.R. § 270.32 and 40 C.F.R. § 271.19, to review, comment, and incorporate appropriate requirements of 40 C.F.R. Parts 264, Subparts I through O and Subparts AA through CC, and

40 C.F.R. Part 63, Subpart EEE directly into the permit or establish other permit conditions that are based on those parts; or take action under Section 3008(a)(3) of RCRA, 42 U.S.C.

§ 6928(a)(3), against the Respondents on the ground that the RCRA permit for the Reconfigured TDU does not comply with a condition that the EPA Region 6 Regional Administrator in commenting on the permit application or draft permit stated was necessary to implement approved State program requirements, whether or not that condition was included in the issued permit. If the Respondent disputes an action taken by EPA pursuant to 40 C.F.R. § 270.32 or 40 C.F.R. § 271.19, the Defendant may invoke Dispute Resolution in accordance with Section IV.E of this CAFO.

H. Submissions

In all instances in which this Compliance Order requires written submissions to EPA and TCEQ, each submission must be accompanied by the following certification:

“I certify under penalty of law to the best of my knowledge and belief, that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

All submissions must be certified on behalf of the Respondent(s) by the signature of a person authorized to sign a permit application or a report under 40 C.F.R. § 270.11.

I. Monitoring, Recordkeeping, and Record Retention Requirements

1. Upon the effective date of this CAFO, all interim operating parameters (Appendix 1, Table A), shakedown operating parameters (Appendix 1, Table B), and final operating parameters limits (Appendix 1, Table C and Paragraph 69.C.6) subject to AWFCO limits shall be monitored by the facility's Continuous Process Monitoring System (CPMS), which records data once per minute in an electronic data log (DLG). In addition, the Respondents shall keep copies

of all documents relating to compliance with the operating parameters limits not monitored by the CPMS, and all other documents relating to compliance with Section III of this CAFO. All records, including electronic records, shall be kept for a period of one year after termination of the CAFO. These monitoring and recordkeeping requirements are in addition to any other monitoring and/or recordkeeping requirements required by federal, state, or local laws, regulations, or permits. This information shall be made available to EPA and TCEQ upon request.

2. In addition, the Respondents shall preserve, for a period of one year after termination of the CAFO, all records and documents in its possession or in the possession of its divisions, employees, agents, contractors, or successors which in any way relate to this CAFO regardless of any document retention policy to the contrary. This information shall be made available to EPA and TCEQ upon request.

J. EPA Approval of Submissions

EPA will review the plans set forth in Paragraphs 69.A.11 (if applicable) and 69.C.2, and notify the Respondents in writing of EPA's approval or disapproval of the plan or any part thereof. Within the time specified, the Respondents shall address the deficiencies and submit a revised plan. EPA will approve, disapprove, or modify the revised submittal. EPA approved plans shall be incorporated by reference into this CAFO.

IV. TERMS OF SETTLEMENT

A. CIVIL PENALTY

70. Pursuant to the authority granted in Section 3008 of RCRA, 42 U.S.C. § 6928, and upon consideration of the entire record herein, including the Findings of Fact and Conclusions of Law, which are hereby adopted and made a part hereof, and upon consideration of the

seriousness of the alleged violations, the Respondents' good faith efforts to comply with the applicable regulations, and the June 2003 RCRA Civil Penalty Policy, it is hereby **ORDERED** that the Respondent U.S. Ecology Texas, Inc. be assessed a civil penalty of **ONE HUNDRED SIXTY-FIVE THOUSAND, SIX HUNDRED FIFTY-SEVEN DOLLARS (\$165,657)**, and the Respondent TD*X Associates L.P. be assessed a civil penalty of **SIX HUNDRED TWENTY-TWO THOUSAND, FOUR HUNDRED SIXTY-THREE DOLLARS (\$622,463)**. The Respondent USET shall pay the assessed civil penalty within thirty (30) days of the effective date of this CAFO. The Respondent TD*X Associates L.P. shall pay the assessed civil penalty in four (4) payments as follows:

Payment No. 1: \$157,978.35 within thirty (30) days of the effective date of this CAFO.

Payment No. 2: \$157,978.35 (\$153,268.99 civil penalty plus interest of \$4,709.36) within one year of the effective date of this CAFO.

Payment No. 3: \$157,978.35 (\$154,822.97 civil penalty plus interest of \$3,155.38) within two years of the effective date of this CAFO.

Payment No. 4: \$157,978.34 (\$156,392.69 civil penalty plus interest of \$1,585.65) within three years of the effective date of this CAFO.

71. The Respondents shall pay the assessed civil penalty by certified check, cashier's check, or wire transfer, made payable to "Treasurer, United States of America, EPA - Region 6". Payment shall be remitted in one of three (3) ways: regular U.S. Postal mail (including certified mail), overnight mail, or wire transfer. For regular U.S. Postal mail, U.S. Postal Service certified mail, or U.S. Postal Service express mail, the check(s) should be remitted to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

For overnight mail (non-U.S. Postal Service, e.g. Fed Ex), the check(s) should be
remitted to:

U.S. Bank
Government Lockbox 979077
US EPA Fines & Penalties
1005 Convention Plaza
SL-MO-C2-GL
St. Louis, MO 63101
Phone No. (314) 418-1028

For wire transfer, the payment should be remitted to:

Federal Reserve Bank of New York
ABA: 021030004
Account No. 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045
Field Tag 4200 of the Fedwire message should read
"D 68010727 Environmental Protection Agency"

PLEASE NOTE: Docket numbers RCRA-06-2012-0936 (Respondent USET) and RCRA-06-2012-0937 (Respondent TD*X) shall be clearly typed on the respective checks to ensure proper credit. If payment is made by check, the check shall also be accompanied by a transmittal letter and shall reference the Respondent's name and address, the case name, and docket number of the CAFO. If payment is made by wire transfer, the wire transfer instructions shall reference the Respondent's name and address, the case name, and docket number of the CAFO. The Respondents shall also send a simultaneous notice of such payment, including a copy of the check and transmittal letter, or wire transfer instructions to the following:

Chief, Compliance Enforcement Section (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Lorena Vaughn
Regional Hearing Clerk (6RC-D)
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

The Respondents' adherence to this request will ensure proper credit is given when penalties are received in the Region.

72. The Respondents agree not to claim or attempt to claim a federal income tax deduction or credit covering all or any part of the civil penalty paid to the United States Treasurer.

73. Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, unless otherwise prohibited by law, EPA will assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim. Interest on the civil penalty assessed in this CAFO will begin to accrue thirty (30) days after the effective date of the CAFO and will be recovered by EPA on any amount of the civil penalty that is not paid by the respective due date. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a). Moreover, the costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. *See* 40 C.F.R. § 13.11(b).

74. EPA will also assess a \$15.00 administrative handling charge for administrative costs on unpaid penalties for the first thirty (30) day period after the payment is due and an additional \$15.00 for each subsequent thirty (30) day period that the penalty remains unpaid. In addition, a

penalty charge of up to six percent per year will be assessed monthly on any portion of the debt which remains delinquent more than ninety (90) days. *See* 40 C.F.R. § 13.11(c). Should a penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. *See* 31 C.F.R. § 901.9(d). Other penalties for failure to make a payment may also apply.

B. PARTIES BOUND

75. The provisions of this CAFO shall apply to and be binding upon the parties to this action, their officers, directors, agents, employees, successors, and assigns. The undersigned representative of each party to this CAFO certifies that he or she is fully authorized by the party whom he or she represents to enter into the terms and conditions of this CAFO and to execute and to legally bind that party to it.

C. ADDITIONAL REQUIREMENTS

76. The Respondents shall undertake the following additional requirements:

A. The Respondents agree that the oil reclamation unit and the TDU are subject to the requirements of 40 C.F.R. Part 61, Subpart FF.

B. Within thirty (30) days of the effective date of the CAFO, the Respondents shall submit to EPA a certification that the following equipment in the oil reclamation unit and the TDU is not in “volatile hazardous air pollutant” (VHAP) service, as that term is defined by 40 C.F.R. § 61.241:

1. pumps;
2. compressors;
3. pressure relief devices;
4. sampling connection systems;
5. open-ended valves or lines;

6. valves;
7. connectors;
8. surge control vessels;
9. bottoms receivers; and
10. control devices and systems.

This certification shall be submitted in accordance with Paragraphs 76.H and 76.I.

C. Pursuant to 40 C.F.R. § 61.354(c), as of the effective date of this CAFO, the Respondents shall install, calibrate, maintain, and operate according to manufacturer's specifications, devices to continuously monitor the control devices operations required by 40 C.F.R. § 61.349.

D. Pursuant to 40 C.F.R. § 61.345(a), within 180 days of the effective date of the CAFO, the Respondents shall install, operate, and maintain covers on Bins 1, 2, 3, 4, and the Centrifuge solid bins that meet the requirements of 40 C.F.R. § 61.345(a)(1). The cover and openings shall be in a closed, sealed position at all times that waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection or sampling, as required by 40 C.F.R. § 61.345(a)(1)(ii). The Respondents shall monitor the cover and all openings for no detectable emissions initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h).

E. The Respondents shall use a submerged fill pipe when transferring waste into the containers by pumping, as required by 40 C.F.R. § 61.345(a)(2).

F. Within ninety (90) days after the reconfiguration of the TDU pursuant to Paragraph 69.A.8 of this CAFO, the Respondents shall conduct performance tests for the TOU and the carbon adsorption system to demonstrate compliance with the requirements of 40 C.F.R.

§ 61.349. The performance tests shall be conducted in accordance with the requirements of 40 C.F.R. § 61.355. A copy of the performance test results shall be submitted to EPA within ninety (90) days of completion of the performance tests. The performance tests results shall be submitted in accordance with Paragraphs 76.H and 76.I.

G. Within 210 days of the effective date of the CAFO, the Respondents shall submit a written report to EPA showing compliance with Paragraphs 76.C, 76.D, and 76.E.

H. The certification and report identified in this Section must be accompanied by the following certification:

“I certify under penalty of law to the best of my knowledge and belief, that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

All submissions must be certified on behalf of the Respondent(s) by the signature of a person authorized to sign a permit application or a report under 40 C.F.R. § 270.11.

I. The certification and report required under this Section shall be sent to the following:

Craig Lutz
Toxics Enforcement Section (6EN-AT)
Compliance Assurance and Enforcement Division
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

D. STIPULATED PENALTIES

77. In addition to any other remedies or sanctions available to EPA, the Respondent(s) shall pay stipulated penalties in the following amounts for each day during which each failure or refusal to comply continues:

a. Failure to Timely Submit Reports or Plans - Paragraphs 69.A.11, 69.A.12, and 69.C.2

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1st through 15th day	\$ 1,000
16th through 30th day	\$ 1,500
31st day and beyond	\$ 2,500

b. Failure to Comply with Certain Interim Operating Requirements – Paragraphs 69.A.5, 69.A.6, 69.A.7 (installation of AWFCO only), 69A.8, and 69.A.11

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1st through 15th day	\$ 1,500
16th through 30th day	\$ 2,500
31st day and beyond	\$ 5,000

c. Failure to Comply with any Other Provision of Section III of this CAFO

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1st through 15th day	\$ 500
16th through 30th day	\$ 1,000
31st day and beyond	\$ 1,500

d. Failure to Comply with Additional Requirements – Section IV.C

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1st through 15th day	\$ 1,500
16th through 30th day	\$ 2,500
31st day and beyond	\$ 5,000

Penalties shall accrue from the date of the noncompliance until the date the violation is corrected, as determined by EPA.

78. The Respondent(s) shall pay stipulated penalties not more than fifteen (15) days after receipt of written demand by EPA for such penalties. Method of payment shall be in accordance with the provisions of Paragraph 71 herein. Interest and late charges shall be paid as stated in Paragraphs 73 - 74 herein.

79. Nothing in this agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of the Respondent(s) violation of this CAFO or of the statutes and regulations upon which this agreement is based, or for the Respondent's violation of any applicable provision of law.

E. DISPUTE RESOLUTION

80. If the Respondents object to any decision or directive of EPA in regard to Section III or IV.C, the Respondents shall notify each other and the following persons in writing of its objections, and the basis for those objections, within thirty (30) calendar days of receipt of EPA's decision or directive:

Associate Director
Hazardous Waste Enforcement Branch (6EN-H)
Compliance Assurance and Enforcement Division
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Chief, RCRA Enforcement Branch (6RC-ER)
Office of Regional Counsel
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

81. The Associate Director of the Hazardous Waste Enforcement Branch or his/her designee (Associate Director), and the Respondents shall then have an additional thirty (30) calendar days from EPA's receipt of the Respondents' written objections to attempt to resolve the dispute. If an agreement is reached between the Associate Director and the Respondents, the agreement shall be reduced to writing and signed by the Associate Director and the Respondents and incorporated by reference into this CAFO.

82. If no agreement is reached between the Associate Director and the Respondents within that time period, the dispute shall be submitted to the Director of the Compliance

Assurance and Enforcement Division or his/her designee (Division Director). The Division Director and the Respondents shall then have a second 30-day period to resolve the dispute. If an agreement is reached between the Division Director and the Respondents, the resolution shall be reduced to writing and signed by the Division Director and the Respondents and incorporated by reference into this CAFO. If the Division Director and the Respondents are unable to reach agreement within this second 30-day period, the Division Director shall provide a written statement of EPA's decision to the Respondents, which shall be binding upon the Respondents and incorporated by reference into the CAFO.

83. If the Dispute Resolution process results in a modification of this CAFO, the modified CAFO must be approved by the Regional Judicial Officer and filed pursuant to Section IV.H (Modifications).

84. The invocation of dispute resolution procedures under this Section shall not extend, postpone, or affect in any way, any obligations of the Respondents under this CAFO, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute. If the Respondents do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IV.D.

F. FORCE MAJEURE

85. A "force majeure event" is any event beyond the control of the Respondents, their contractors, or any entity controlled by the Respondents that delays the performance of any obligation under this CAFO despite the Respondents' best efforts to fulfill the obligation. "Best efforts" includes anticipating any potential force majeure event and addressing the effects of any such event (a) as it is occurring and (b) after it has occurred, to prevent or minimize any resulting

delay to the greatest extent possible. "Force Majeure" does not include the Respondents' financial inability to perform any obligation under this CAFO, but does include any delays attributable to the TCEQ's permitting process and the conduct of the contested case hearing.

86. The Respondents shall provide notice orally or by electronic or facsimile transmission as soon as possible, but not later than 72 hours after the time the Respondents first knew of, or by the exercise of due diligence, reasonably should have known of, a claimed force majeure event. The Respondents shall also provide written notice, as provided in Section IV.G of this CAFO, within seven days of the time the Respondents first knew of, or by the exercise of due diligence, reasonably should have known of, the event. The notice shall state the anticipated duration of any delay; its cause(s); the Respondents' past and proposed actions to prevent or minimize any delay; a schedule for carrying out those actions; and the Respondents' rationale for attributing any delay to a force majeure event. Failure to give such notice shall preclude the Respondents from asserting any claim of force majeure.

87. The Respondent also shall provide notice orally or by electronic or facsimile transmission to the other Respondent not later than 24 hours after the time Respondent first knew of, or by the exercise of due diligence, reasonably should have known of, a claimed force majeure event, provided that the failure to give such notice shall not limit either Respondent's responsibilities under this CAFO.

88. If the Complainant agrees that a force majeure event has occurred, the Complainant may agree to extend the time for the Respondents to perform the affected requirements for the time necessary to complete those obligations. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other

obligation. Where the Complainant agrees to an extension of time, the appropriate modification shall be made pursuant to Section IV.H of this CAFO.

89. If the Complainant does not agree that a force majeure event has occurred, or does not agree to the extension of time sought by the Respondents, the Complainant's position shall be binding, unless the Respondents invokes Dispute Resolution under Section IV.D of this CAFO. In any such dispute, the Respondents bear the burden of proving, by a preponderance of the evidence, that each claimed force majeure event is a force majeure event; that the Respondents gave the notice required by the paragraph above, that the force majeure event caused any delay the Respondents' claimed was attributable to that event; and that the Respondents exercised their reasonable best efforts to prevent or minimize any delay caused by the event. If the Respondents carry this burden, the delay at issue shall be deemed not to be a violation of the affected obligation of this CAFO.

G. NOTIFICATION

90. Unless otherwise specified elsewhere in this CAFO, whenever notice is required to be given, whenever a report or other document is required to be forwarded by one party to another, or whenever a submission or demonstration is required to be made, it shall be directed to the individuals specified below at the addresses given (in addition to any action specified by law or regulation), unless these individuals or their successors give notice in writing to the other parties that another individual has been designated to receive the communication:

Complainant:

Chief, Compliance Enforcement Section (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Respondent U.S. Ecology Texas, Inc.:

Mary Reagan
McGinnis, Lochridge & Kilgore, L.L.P.
600 Congress Avenue
Suite 2100
Austin, Texas 78701

Respondent TD*X Associates, L.P.:

J.D. Head
Fritz, Bryne, Head & Harrison, PLLC
98 San Jacinto Boulevard
Suite 2000
Austin, TX 78701

Texas Commission on Environmental Quality

Section Manager
Industrial and Hazardous Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087 MC 130
Austin, TX 78711

H. MODIFICATION

91. The terms, conditions, and compliance requirements of this CAFO may not be modified or amended except as otherwise specified in this CAFO, or upon the written agreement of the Complainant and Respondent(s), and approved by the Regional Judicial Officer, and such modification or amendment being filed with the Regional Hearing Clerk.

I. RETENTION OF ENFORCEMENT RIGHTS

92. EPA does not waive any rights or remedies available to EPA for any other violations by the Respondents of Federal or State laws, regulations, or permitting conditions.

93. Except as herein provided, nothing in this CAFO shall limit the power and authority of EPA or the United States to take, direct, or order all actions to protect public health, welfare, or the environment, or prevent, abate or minimize an actual or threatened release of hazardous

substances, pollutants, contaminants, hazardous substances on, at or from the Respondent USET's facility or Respondent TD*X's oil reclamation unit and related equipment.

Furthermore, nothing in this CAFO shall be construed or to prevent or limit EPA's civil and criminal authorities, or that of other Federal, State, or local agencies or departments to obtain penalties or injunctive relief under other Federal, State, or local laws or regulations.

94. The Complainant reserves all legal and equitable remedies available to enforce the provisions of this CAFO. This CAFO shall not be construed to limit the rights of the EPA or United States to obtain penalties or injunctive relief under RCRA or under other federal or state laws, regulations, or permit conditions.

95. In any subsequent administrative or judicial proceeding initiated by the Complainant or the United States for injunctive relief, civil penalties, or other appropriate relief relating to this Facility or the oil reclamation unit, the Respondents shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the Complainant or the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to this CAFO.

96. This CAFO is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. The Respondents are responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits. The Respondents' compliance with this CAFO shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The Complainant does not warrant or aver in any manner that the Respondents' compliance with any aspect of this

CAFO will result in compliance with provisions of the RCRA or with any other provisions of federal, State, or local laws, regulations, or permits.

J. INDEMNIFICATION OF EPA

97. Neither EPA nor the United States Government shall be liable for any injuries or damages to person or property resulting from the acts or omissions of the Respondents, their officers, directors, employees, agents, receivers, trustees, successors, assigns, or contractors in carrying out the activities required by this CAFO, nor shall EPA or the United States Government be held out as a party to any contract entered into by the Respondents in carrying out the activities required by this CAFO.

K. COSTS

98. Each party shall bear its own costs and attorney's fees. Furthermore, each Respondent specifically waives its right to seek reimbursement of its costs and attorney's fees under 5 U.S.C. § 504 and 40 C.F.R. Part 17.

L. TERMINATION

99. At such time as the Respondents believe they have completed all of the requirements of this CAFO, they may request that EPA concur whether all of the requirements of this CAFO have been satisfied. Such request shall be in writing and shall provide the necessary documentation to establish whether there has been full compliance with the terms and conditions of this CAFO. EPA will respond to said request in writing within ninety (90) days of receipt of the request. This CAFO shall terminate when all actions required to be taken by this CAFO have been completed, and the Respondents have been notified by the EPA in writing that this CAFO has been satisfied and terminated.

M. EFFECTIVE DATE


100. This CAFO, and any subsequent modifications, become effective upon filing with the Regional Hearing Clerk.

THE UNDERSIGNED PARTIES CONSENT TO THE ENTRY OF THIS CONSENT AGREEMENT AND FINAL ORDER:

FOR THE RESPONDENT:

Date: _____

9/27/12


US Ecology Texas, Inc.

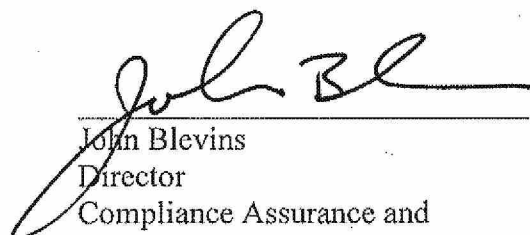
FOR THE RESPONDENT:

Date: September 26, 2012

Carl R. Palmer
TD*X Associates L.P.

FOR THE COMPLAINANT:

Date: 10.03.12

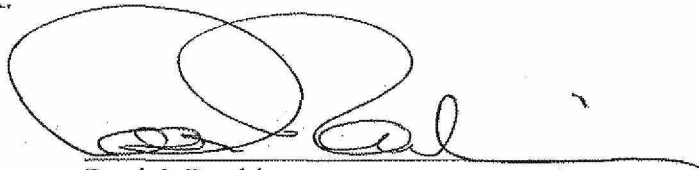


John Blevins
Director
Compliance Assurance and
Enforcement Division

FINAL ORDER

Pursuant to the Section 3008 of RCRA, 42 U.S.C. § 6928, and the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, 40 C.F.R. Part 22, the foregoing Consent Agreement is hereby ratified. This Final Order shall not in any case affect the right of EPA or the United States to pursue appropriate injunctive relief or other equitable relief for criminal sanctions for any violations of law. This Final Order shall resolve only those causes of action alleged herein. Nothing in this Final Order shall be construed to waive, extinguish or otherwise affect the Respondents' (or their officers, agents, servants, employees, successors, or assigns) obligation to comply with all applicable federal, state, and local statutes and regulations, including the regulations that were the subject of this action. The Respondents are ordered to comply with the Compliance Order and terms of settlement as set forth in the Consent Agreement. Pursuant to 40 C.F.R. § 22.31(b), this Final Order shall become effective upon filing with the Regional Hearing Clerk.

Date: 10/4/12

A handwritten signature in dark ink, appearing to read 'Patrick Rankin', is written over a horizontal line.

Patrick Rankin
Regional Judicial Officer

APPENDIX 1 – OPERATING PARAMETERS

TABLE A

TDU OIL RECLAMATION SYSTEM INTERIM REQUIREMENTS PRIOR TO TOU INSTALLATION

Tag No.	Equipment Operating Parameter	Operating Parameter Limit	Compliance Basis
TT-18/19	TDU Dryer, Minimum Combustion Chamber Temperature	Maintain Temperature > 1,400°F	AWFCO: CPMS ¹ , 60-sec time delay
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS, 6-min Rolling Average (RA) ²
OE-1	Purge Vent Gas Stream Maximum O ₂ Concentration	O ₂ < 7%	AWFCO: CPMS, 60-sec time delay
FE-101	Maximum Purge Vent Rate	Purge Vent Rate < 180 scfm	AWFCO: CPMS, Hourly Rolling Average (HRA) ³
M-100	Minimum Percent Excess Air, Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow
TE-28	Maximum Condenser System Exhaust Temperature	Temperature < 120°F	AWFCO: CPMS, HRA
	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation ⁴
	Maximum TDU Feed Organic Halide Concentration	[Total Organic Halides] < 1,500 ppm/Bin	Blending Protocols & Documentation

¹ Continuous Process Monitoring System – See Paragraph 69.I of CAFO.

² Previous six 1-minute readings are summed and divided by six.

³ 40 C.F.R. §§ 63.1209(b)(5).

⁴ See Paragraph 69.A.3 of the CAFO.

TABLE B

**TDU OIL RECLAMATION SYSTEM REQUIREMENTS AFTER TOU INSTALLATION
PRE-COMPLIANCE DEMONSTRATION TEST OPERATIONS**

Tag No.	Equipment Operating Parameter	Shakedown (Pre-Test) OPL	Compliance Basis
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS ⁵ , 6-min RA ⁶
M-05	TDU Dryer, Cylinder Rotation On	Motor Operating	AWFCO: CPMS, Instantaneous
M-18	Product Discharge System	Motor Operating	AWFCO: CPMS, Instantaneous
M-21	Recirculation Blower Operating	Motor Operating	AWFCO: CPMS, Instantaneous
TT-121	TOU, Minimum Combustion Chamber Temperature	Maintain Temperature > 1,400°F	AWFCO: CPMS, HRA ⁷
KY-110	TOU, Minimum Residence Time (Calculated from Purge Vent Flow Rate, Exhaust T, and Air Ratio)	Residence Time > 0.5 seconds	AWFCO: CPMS, HRA
AE-5/ OE-5	TOU Exhaust Gas, Maximum CO Concentration	[CO] < 100 ppmV @ 7% O ₂	AWFCO: CEMS for CO, HRA
OE-1	Purge Vent Gas Stream, Maximum O ₂ Concentration	[O ₂] < 7%	AWFCO: CPMS, Instantaneous
FE-101	Maximum Purge Vent Rate	Vent Flow < 250 scfm	AWFCO: CPMS, HRA
FCV-102	Valve Position to Ensure Purge Vent is not Directed Away from TOU	Valve Closed	AWFCO: CPMS, 60-sec delay
M-121	Minimum Percent Excess Air, Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow
TE-28	Maximum Condenser System Exhaust Temperature	Maintain Temperature < 120°F	AWFCO: CPMS, HRA

⁵ Continuous Process Monitoring System – See Paragraph 69.I of the CAFO.

⁶ Previous six 1-minute readings are summed and divided by six.

⁷ 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation ⁸ , Feed Stream Analysis Plan (if applicable) ⁹
	Maximum TDU Feed Organic Halide Concentration	[Total Organic Halides] < 1,500 ppm/Bin	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Semi-Volatile Metals Concentration ¹⁰	N/A	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Low-Volatile Metals Concentration ¹¹	N/A	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)

⁸ See Paragraph 69.A.3 of the CAFO.

⁹ See Paragraph 69.A.11 of the CAFO.

¹⁰ Semi-volatile metals means a combination of cadmium and lead.

¹¹ Low-volatile metals means a combination of Arsenic, Beryllium, and Chromium.

TABLE C

**TDU OIL RECLAMATION REQUIREMENTS AFTER TOU INSTALLATION
POST-COMPLIANCE DEMONSTRATION TEST OPERATIONS**

Tag No.	Equipment Operating Parameter	Interim/Final (Post-Test) OPL	Compliance Basis
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS ¹² , 6-min RA ¹³
M-05	TDU Dryer, Cylinder Rotation On	Motor Operating	AWFCO: CPMS, Instantaneous
M-18	Product Discharge System	Motor Operating	AWFCO: CPMS, Instantaneous
M-21	Recirculation Blower Operating	Motor Operating	AWFCO: CPMS, Instantaneous
TT-121	TOU, Minimum Combustion Chamber Temperature	OPL Established @ > 3-Run Average from CDT	AWFCO: CPMS, HRA ¹⁴
KY-110	TOU, Minimum Residence Time (Calculated from Purge Vent Flow Rate, Exhaust T, and Air Ratio)	Residence Time > 0.5 seconds	AWFCO: CPMS, HRA
AE-5/ OE-5	TOU Exhaust Gas, Maximum CO Concentration	Semi-Annual Testing until Waste Analysis Plan Approved, then Annual Testing	Performance Testing in lieu of CEMS; Waste Analysis Plan based with other OPLs
OE-1	Purge Vent Gas Stream, Maximum O ₂ Concentration	[O ₂] < 7%	AWFCO: CPMS, Instantaneous
FE-101	Maximum Purge Vent Rate	Vent Flow < 250 scfm	AWFCO: CPMS, HRA
FCV-102	Valve Position to Ensure Purge Vent is not Directed Away from TOU	Valve Closed	AWFCO: CPMS, 60-sec time delay
M-121	Minimum Percent Excess Air, Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow

¹² Continuous Process Monitoring System – See Paragraph 69.I of CAFO.

¹³ Previous six 1-minute readings are summed and divided by six.

¹⁴ 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

TE-28	Maximum Condenser System Exhaust Temperature	OPL Established @ < 3-run Average Based on CDT	AWFCO: CPMS, HRA
	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation ¹⁵ , Feed Stream Analysis Plan (if applicable) ¹⁶
	Maximum TDU Feed Organic Halide Concentration	OPL Established as Measured Ratio ¹⁷	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Semi-Volatile Metals Concentration ¹⁸	OPL Established as Measured Ratio ¹⁹	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Low-Volatile Metals Concentration ²⁰	OPL Established as Measured Ratio ²¹	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)

¹⁵ See Paragraph 69.A.3 of the CAFO.

¹⁶ See Paragraph 69.A.11 of the CAFO.

¹⁷ Maximum TDU Feed Concentration established as a measured ratio (not to exceed 4000 ppm/bin) from emissions data collected during CDT. See plan example calculations.

¹⁸ Semi-volatile metals means a combination of cadmium and lead.

¹⁹ Maximum TDU Feed Concentration established as measured ration from emissions data collected during CDT. See plan example calculations.

²⁰ Low-volatile metals means a combination of Arsenic, Beryllium, and Chromium.

²¹ Maximum TDU Feed Concentration established as measured ratio from emissions data collected during CDT. See plan example calculations.

APPENDIX 2 – BLENDING PROTOCOLS

**CONTAINS CONFIDENTIAL BUSINESS
INFORMATION**

DOCUMENT STORED IN FILE ROOM

APPENDIX 3

COMPLIANCE DEMONSTRATION TEST PLAN

**CONTAINS CONFIDENTIAL BUSINESS
INFORMATION**

DOCUMENT STORED IN FILE ROOM

CERTIFICATE OF SERVICE

I hereby certify that on the 4th day of October, 2012, the original and one copy of the foregoing Consent Agreement and Final Order (CAFO) was hand delivered to the Regional Hearing Clerk, U.S. EPA - Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733, and that true and correct copies of the CAFO were sent to the following by the method indicated below:

For US Ecology Texas, Inc.

Certified Mail – Return Receipt Requested – 7007 0710 0002 1385 1491

Mary Reagan
McGinnis, Lochridge & Kilgore, L.L.P.
600 Congress Avenue, Suite 2100
Austin, Texas 78701

For TD*X Associates LP

Certified Mail – Return Receipt Requested – 7007 0710 0002 1385 1507

J.D. Head
Fritz, Bryne, Head & Harrison, PLLC
98 San Jacinto Boulevard
Suite 2000
Austin, TX 78701

Evan L Pearson



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 Ross Avenue
Dallas, Texas 75202-2733

JUN 24 2016

Mr. Estuardo Silva
Louisiana Department of Environmental Quality
Office of Environmental Services
Waste Permits Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

RE: Draft Hazardous Waste Modified Operating and Post Closure Permit
Chemical Waste Management, Inc.
7170 John Brannon Road
Carlyss, LA 70665
Permit# LAD00077201-OP-RN-MO-1
AI# 742/PER20140007

Dear Mr. Silva:

EPA has the following comments on the draft Hazardous Waste Operating and Post Closure Permit for the Chemical Waste Management, Inc. facility located at 7170 John Brannon Road, Carlyss, LA 70665 (Draft Permit). Chemical Waste Management, Inc. (Chem Waste) seeks to add two oil recovery units (ORUs), two thermal desorber units (TDUs), and 19 associated tanks to its operations at its Carlyss, Louisiana facility. The ORUs will be utilized to separate recoverable oils from drilling fluids, refinery tank bottoms, commercially exempt waste, and other non-hazardous and hazardous waste. The TDUs will treat contaminated tank bottoms, sludge, catalyst slurry oil, and other non-hazardous and hazardous waste. The TDUs will be designed to separate organic constituents from a waste stream by condensing the organic components, which would allow for the recovery or disposal of the contaminants. The non-condensable gases will be routed to a thermal oxidizer unit (TOU). The TDU is proposed to be permitted as a miscellaneous unit.

Condition II.E.25.e of the Draft Permit provides that "[o]ne hundred and eighty (180) days before planned construction, the Permittee must submit finalized engineering specifications and operating parameters for the proposed Thermal Desorber Units to the Administrative Authority for approval. The information submitted must comply with the requirements of this permit and L.A.C. 33:V. Chapter 32, and all applicable regulations." Chapter 32 is entitled "Miscellaneous Units", and is the State equivalent of 40 C.F.R. Part 264, Subpart X. Due to the absence of any proposed engineering specifications, performance test, operating conditions, operating parameters, monitoring and recordkeeping requirements, we have identified permit requirements for the TDU and TOU below that we believe are required by the regulations for operation of the TDU and TOU.

How the TDU and TOU are permitted determine the appropriate permit requirements for the units. The material being treated in the TDU and the TOU is already a hazardous waste. Thermal treatment after a material becomes a hazardous waste is fully regulated under RCRA, 54 Fed. Reg. 50968, 50973 (December 11, 1989). The combustion of the non-condensable gases in the TOU meets the

definition of "thermal treatment" in L.A.C. 33:V.109 [40 C.F.R. § 260.10] and thus requires a RCRA permit. The TOU would meet the definition of incinerator in L.A.C. 33:V.109 [40 C.F.R. § 260.10] (an enclosed device that uses controlled flame combustion). However, rather than permitting the TOU as an incinerator, LDEQ could permit the TDU and TOU together as a miscellaneous unit under L.A.C. 33:V. Chapter 32 [40 C.F.R. Part 264, Subpart X]. If this occurs, then LDEQ is required to include in the permit requirements from L.A.C. 33:V. Chapters 3, 5, 7, 17, 19, 21, 23, 25, 27, 29, 31, 4301.F, H, 4302, 4303 and 4305, all other applicable requirements of L.A.C. 33:V. Subpart 1, and of 40 C.F.R. Part 63, Subpart EEE and 40 C.F.R. Part 146, that are appropriate for the miscellaneous unit being permitted.¹

The decisions as to what appropriate requirements would be included in the permit would be left to LDEQ. However, we believe that the permit conditions would be similar to those set forth in the enclosed Consent Agreement and Final Order, In Re: US Ecology Texas, Inc. and TD*X Associates, LP, EPA Docket Nos. RCRA-06-2012-0936 and RCRA-06-2012-0937, filed October 4, 2012. These permit conditions would include, but not be limited to: 1) a startup, shutdown, and malfunction plan; (2) a performance test, which includes meeting a 99.99% destruction removal efficiency for each principle organic hazardous constituent and meeting certain emission limits; (3) automatic waste feed cutoff system; (4) operating parameters; and (5) investigation, recordkeeping, testing, and reporting requirements. This position was also previously communicated to LDEQ in a letter from EPA to Mr. J. D. Head dated May 2, 2016, in which a copy was sent to LDEQ. A copy of this letter is also enclosed.

If you have any questions, please feel free to call me at (214) 665-8022.

Sincerely,



Susan Spalding
Associate Director
Hazardous Waste Branch (6MM-R)
Multimedia Division

Enclosure

¹ The equivalent Federal provisions are 40 C.F.R. Part 264, Subparts I through O, AA, BB, and CC, 40 C.F.R. Part 270, 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 146. 40 C.F.R. § 264.601.

EXHIBIT 2

A - Rineco Consent Decree August 16, 2010

B - Rineco Consent Decree Modification January 3, 2012

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF ARKANSAS
WESTERN DIVISION

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	Civil Action No. 4-07-CV
v.)	01189SWW
)	
)	
RINECO CHEMICAL)	
INDUSTRIES, INC.)	
)	
Defendant.)	
)	

CONSENT DECREE

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Plaintiff United States of America ("United States"), on behalf of the United States Environmental Protection Agency ("EPA"), filed a Complaint in this action on December 12, 2007, alleging that Defendant Rineco Chemical Industries, Inc. ("Defendant"), violated Sections 3005(a) and 3010 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6925(a) and 6930, and Arkansas Pollution Control and Ecology Commission ("APCEC") Regulation No. 23, which incorporates federal regulations approved by EPA pursuant to RCRA that are part of the federally-enforceable State hazardous waste program relating to the generation, transportation, treatment, storage, handling, and disposal of hazardous waste. On November 24, 2008, the Court issued an Order (doc.#85) which granted the United States' Motion for Leave to File an Amended and Supplemental Complaint, which in addition to the violations alleged in the Complaint, alleges that Rineco violated its RCRA Permit 28(H), Modules II(A), III(M), III(E), XV(A); and 40 C.F.R. §§ 264.31, 264.173, 264.1056, 264.1086(d) (3).

The Complaint alleges that Defendant has treated, stored, and disposed of hazardous waste in the Thermal Metal Wash unit ("TMW") at its facility located near Benton, Arkansas, without a RCRA permit, in violation of Section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 Part 264, Subpart X and Part 270, §§ 264.600, 270.1, 270.2, 270.10; that Defendant has failed

to file with the EPA or the State of Arkansas ("State") a notification and description of hazardous waste activity performed in the TMW unit at Defendant's facility in violation of Section 3010 of RCRA, 42 U.S.C. § 6930; and that Defendant has failed to establish financial assurance requirements for closure of the TMW and related storage units at Defendant's facility in violation of 40 C.F.R. §§ 264.140 - 264.151 and APCEC Regulation No. 23 §§ 264.140 - 264.151.

In addition to the allegations in the Complaint, the Amended and Supplemental Complaint alleges that Defendant has failed to design, maintain, construct, and operate the TMW and other units at Defendant's facility in such a manner as to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water, in violation of Defendant's RCRA Permit 28(H), Module II(A), 40 C.F.R. § 264.31, and APCEC Regulation No. 23 § 264.31; failed to equip numerous open-ended valves and lines with caps or plugs in violation of Defendant's RCRA Permit 28(H), Module XV(A), 40 C.F.R. § 264.1056, and APCEC Regulation No. 23 § 264.1056/265.1056; and stored hazardous waste in an open container for more than fifteen (15) minutes in violation of Defendant's RCRA Permit 28(H), Module III(E), 40 C.F.R. § 264.173, RCRA Permit 28(H), Module III(M), 40 C.F.R. §

264.1086(d)(3), and APCEC Regulation No. 23 §§ 264.173,
264.1086(d)(3).

On March 4, 2009, the Court issued a Memorandum and Order (doc. #91) in which the Court granted the United States' Motion for Summary Judgment (doc. #40) as to liability on each of the five claims asserted in the Complaint and denied Defendant's Motion for Summary Judgment (doc. #13). The Court further ordered that the matter would proceed as to any appropriate civil penalties and as to the three remaining claims in the Amended and Supplemental Complaint. Nothing in this Consent Decree shall supercede the findings of fact or conclusions of law set forth in the Court's Order dated March 4, 2009.

Defendant denies any liability to the United States arising out of the transactions or occurrences alleged in the United States' Complaint and the United States' Amended and Supplemental Complaint. Defendant also denies the truth of any allegations in the Complaint or the Amended and Supplemental Complaint except the allegations pertaining to venue and subject matter and personal jurisdiction.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, with the consent of the Parties, IT IS
HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), and over the Parties. Venue lies in this District pursuant to 28 U.S.C. §§ 1391(b) and (c), and 1395(a)(1), because the violations complained of and the claims asserted herein arose in this district, and because Defendant conducts business at facilities located in this district. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court's jurisdiction over this Decree and any such action and over Defendant and consents to venue in this judicial district.

II. APPLICABILITY

2. The obligations of this Consent Decree apply to and are binding upon the United States, and upon the Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

3. No transfer of ownership or operation of the Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Decree are implemented. At least thirty (30) Days prior to such transfer, Defendant shall provide a copy

of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region 6, the United States Attorney for the Eastern District of Arkansas, and the United States Department of Justice, in accordance with Section XIII of this Decree (Notices). Defendant may assert that such proposed written agreement to be provided under this Paragraph is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2.

4. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties include responsibility for compliance with any provision of this Decree, as well as to any contractor entity retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

5. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree, unless Defendant establishes that such failure resulted from a Force Majeure event as defined in Section VIII of this Consent Decree.

III. DEFINITIONS

6. Terms used in this Consent Decree that are defined in RCRA or in regulations promulgated pursuant to or authorized by RCRA shall have the meanings assigned to them in RCRA or such regulations, unless otherwise provided in this Decree.

Regulations referred to by their federal citations also shall include reference to their State counterparts (e.g. 40 C.F.R. § 264.601 also includes reference to APCEC Regulation No. 23 § 264.601). Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. "ADEQ" shall mean the Arkansas Department of Environmental Quality and any of its successor departments or agencies;
- b. "Amended Complaint" shall mean the Amended and Supplemental Complaint filed by the United States in this action;
- c. "Complaint" shall mean the Complaint filed by the United States in this action;
- d. "Consent Decree" or "Decree" shall mean this Decree;
- e. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or a federal holiday, the period shall run until the close of business of the next business day;

- f. "Defendant" shall mean Rineco Chemical Industries, Inc., a corporation incorporated under the laws of the State of Arkansas and licensed to do business in the State of Arkansas;
- g. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;
- h. "Effective Date" shall have the definition provided in Section XIV;
- i. "Facility" shall mean Defendant's land, structures, other appurtenances, and improvements on the land, used for the treatment, storage, or disposal of hazardous waste located at 817 Vulcan Road in Benton, Arkansas;
- j. "Paragraph" shall mean a portion of this Decree identified by an Arabic numeral;
- k. "Parties" shall mean the United States and Defendant;
- l. "Section" shall mean a portion of this Decree identified by a roman numeral;
- m. "State" shall mean the State of Arkansas;
- n. "TMW" shall mean the Thermal Metal Wash unit, including the thermal oxidation unit, at the Facility.
- p. "United States" shall mean the United States of America, acting on behalf of EPA.

IV. CIVIL PENALTY

7. Within thirty (30) Days after the Effective Date of this Consent Decree, Defendant shall pay the sum of \$1,350,000 as a civil penalty.

8. Defendant shall pay the civil penalty due by Fed Wire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Defendant, following lodging of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney's Office for the Eastern District of Arkansas, USA Post Office Box 1229 Little Rock, AR 72203, 501-340-2600. At the time of payment, Defendant shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States v. Rineco Chemical Industries, Inc., and shall reference the civil action number and DOJ case number 90-7-1-08902, to the United States in accordance with Section XIII of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

9. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section VII (Stipulated Penalties) in calculating its federal income tax.

V. COMPLIANCE REQUIREMENTS

10. Application for permit for the TMW. Within sixty (60) Days after the Effective Date of this Consent Decree, Defendant shall submit to the Director of ADEQ an application for a RCRA permit for its TMW as a Subpart X-Miscellaneous Unit in accordance with 40 C.F.R. §§ 264.600-264.603, 40 C.F.R. §§ 270.10-270.14, 270.23, 270.30-270.33, the Risk Burn Guidance for Hazardous Waste Combustion Facilities, OSWER, EPA530-R-01-001, July 2001; and the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, OSWER, EPA-R-05-006, September 2005. Within sixty (60) Days after the Effective Date of this Consent Decree, Defendant also shall submit to the Director of ADEQ an application for a RCRA permit for storage of hazardous waste related to the TMW. Defendant shall simultaneously provide the Associate Director of the Hazardous Waste Enforcement Branch, EPA Region 6, with a copy of such applications, in accordance with Section XIII (Notices). The TMW must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. The permit application must include such terms and conditions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements for responses to releases of hazardous waste or hazardous constituents from the TMW. The

permit application must include those requirements of subparts I through O, X, and subparts AA through CC of part 264, part 270, part 63 subpart EEE, and part 146 of chapter 40 that are appropriate for the TMW.

11. Defendant must notify the public, hold a public meeting, and offer the public an opportunity to comment regarding Defendant's application for a permit for the TMW in accordance with 40 C.F.R. Part 124, as applicable, and 40 C.F.R. § 270.42(c).

12. Preparation and Submission of Trial Burn Plan. For the purpose of determining feasibility of compliance with the performance standards of 40 C.F.R. § 264.343, and determining adequate operating conditions under 40 C.F.R. §§ 264.345, as part of its RCRA permit application for the TMW, Defendant must prepare and submit to the Director of ADEQ a trial burn plan and perform a trial burn in accordance with 40 C.F.R. § 270.62(b).

13. The trial burn plan must include all of the information required by 40 C.F.R. § 270.62(b)(2).

14. After the Director of ADEQ has evaluated the sufficiency of the information provided, Defendant must provide any supplemental information required by the Director of ADEQ in accordance with 40 C.F.R. § 270.62(b)(3).

15. During the trial burn, Defendant must calculate the trial Principal Organic Hazardous Constituents ("POHCs")

specified by the Director of ADEQ based on the waste analysis data in the trial burn plan submitted by Defendant in accordance with 40 C.F.R. § 270.62(b)(4).

16. The trial burn performed by Defendant must comply with 40 C.F.R. § 270.62(b)(5).

17. Defendant shall not commence the trial burn until after the Director of ADEQ has issued a notice to all persons on the Facility mailing list as set forth in 40 C.F.R. § 124.10(c)(1)(ix) and to the appropriate units of State and local government as set forth in 40 C.F.R. §§ 124.10(c)(1)(x) announcing the scheduled commencement and completion date for the trial burn as required by 40 C.F.R. § 270.62(b)(6).

18. During the trial burn (or as soon after the burn as is practicable), Defendant shall make the determinations required by 40 C.F.R. § 270.62(b)(7). During the trial burn, Defendant must demonstrate compliance with the performance standards required by 40 C.F.R. § 264.343.

19. Preparation and Submission of Risk Burn Plan. To collect emissions data for evaluation in a site-specific risk assessment, as part of its RCRA permit application for the TMW, Defendant also must prepare and submit a risk burn plan and perform a risk burn in accordance with the Risk Burn Guidance for Hazardous Waste Combustion Facilities, OSWER, EPA530-R-01-001, July 2001; and the Human Health Risk Assessment Protocol for

Hazardous Waste Combustion Facilities, OSWER, EPA-R-05-006, September 2005. The risk burn should be integrated with the trial burn to produce a consistent set of proposed enforceable permit conditions.

20. The risk burn performed by Defendant shall collect fugitive and stack emissions data and define the operating requirements for the TMW based on control parameters identified in Chapters 4 through 7 of the Risk Burn Guidance for Hazardous Waste Combustion Facilities. During the risk burn, Defendant shall evaluate each of the constituents specified in Chapters 4 through 7 of the Risk Burn Guidance including the dioxins, furans, other organics, metals, particulate matter, hydrogen chloride, and chlorine identified therein.

21. During the risk burn (or as soon after the burn as is practicable), the Defendant shall make the determinations set forth in the Risk Burn Guidance for Hazardous Waste Combustion Facilities, and the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities deemed appropriate by the Director of ADEQ. During the risk burn, Defendant must demonstrate that emissions from the TMW do not present a risk to human health or the environment.

22. Within ninety (90) days after completion of the trial and risk burns, or later if approved by the Director of ADEQ, Defendant must submit to the Director of ADEQ a certification

that the trial and risk burns have been carried out in accordance with the approved trial and risk burn plans, and must submit the results of all the determinations required in 40 C.F.R. § 270.62(b) (7).

23. All data collected during the trial and risk burns must be submitted to the Director of ADEQ following the completion of the trial and risk burns. A copy of the data collected during the trial and risk burns also must be submitted to the Associate Director of the Hazardous Waste Enforcement Branch, EPA Region 6, in accordance with Section XIII of this Consent Decree (Notices).

24. All submissions required by Section V must be certified on behalf of the Defendant by the signature of a person authorized to sign a permit application or a report under 40 C.F.R. § 270.11.

25. Defendant shall request that the final RCRA permit for the TMW include performance standards, operating requirements, monitoring and inspection requirements, and closure requirements in accordance with 40 C.F.R. §§ 264.343, 264.345, 264.347, and 264.351. Defendant also shall request that the final permit for the TMW shall include risk based terms and conditions necessary to protect human health and the environment in accordance with the Risk Burn Guidance for Hazardous Waste Combustion Facilities

and the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities.

26. Continued Operation. Upon Defendant's submission of the initial application for a RCRA permit for the TMW, including the trial and risk burn plans, Defendant may continue to operate the TMW during the one year following such submission if Defendant otherwise maintains compliance with the requirements of this Decree. Whenever the Director of ADEQ issues a final permit for the TMW, Defendant immediately must comply with that permit, even if the permit is issued in less than one year after Defendant submits its initial application. Without a final permit, Defendant may not operate the TMW at anytime later than one year after Defendant submits its initial application, except as that time is enlarged under Paragraphs 29, 45, 46, 47, or 76 of this Consent Decree. The requirements of this Paragraph shall not be stayed as a result of any challenge or appeal by Defendant of the final RCRA permit for the TMW, or any of its terms or conditions, issued by the Director of ADEQ.

27. EPA Review and Comment. Nothing in this Consent Decree shall limit the EPA's rights under applicable environmental laws or regulations, including but not limited to, Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925, 40 CFR §§ 270.32 and 40 C.F.R. §§ 271.19, to review, comment, and incorporate applicable requirements of parts 264 and 266 through 268 of

chapter 40 directly into the permit or establish other permit conditions that are based on those parts; or to take action under Section 3008(a)(3) of RCRA, 42 U.S.C. § 6928, against Defendant on the ground that the RCRA permit for the TMW does not comply with a condition that the EPA Regional Administrator in commenting on the permit application or draft permit stated was necessary to implement approved State program requirements, whether or not that condition was included in the final permit. If Defendant disputes an action taken by EPA pursuant to 40 CFR §§ 270.32 or 40 C.F.R. §§ 271.19, the Defendant may ask the District Court to resolve such dispute in accordance with Section IX of this Consent Decree (Dispute Resolution). The District Court shall resolve such dispute in accordance with applicable law.

28. To comply with this Consent Decree, Defendant must obtain a RCRA permit for the TMW as a Subpart X-Miscellaneous Unit in accordance with 40 C.F.R. §§ 264.600-264.603, 40 C.F.R. §§ 270.10-270.14, 270.23, 270.30-270.33, the Risk Burn Guidance for Hazardous Waste Combustion Facilities, OSWER, EPA530-R-01-001, July 2001; and the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, OSWER, EPA-R-05-006, September 2005.

29. TMW Permit. Defendant shall prepare and submit its application for a RCRA permit for the TMW as required in this

Section V. Defendant may seek relief under the provisions of Section VIII of this Consent Decree (Force Majeure) for any delay in the performance of any such obligations resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted a timely and complete application and has taken all other actions necessary to obtain such permit or approval.

30. Fugitive Emissions. Within thirty (30) Days after the Effective Date of this Consent Decree, during the period before Defendant obtains its RCRA permit for the TMW, consistent with 40 C.F.R. §§ 264.345(d) and 264.347(b), Defendant shall control fugitive emissions from the TMW by:

- a. Keeping the treatment zone totally sealed against fugitive emissions; or
- b. Maintaining a treatment zone pressure lower than atmospheric pressure; or
- c. Establishing an alternative means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of treatment zone pressure lower than atmospheric pressure.

Defendant shall conduct a thorough visual inspection of the TMW treatment zone and associated equipment (pumps, valves, conveyors, pipes, etc.), at least daily, for leaks, spills, fugitive emissions, and other signs of tampering. The results of

this inspection must be recorded, and such records must be placed in the operating record for the Facility required by 40 C.F.R. § 264.73.

As part of its application for a RCRA permit for the TMW, Defendant shall propose as permit conditions the above fugitive emissions requirements.

31. Within sixty (60) Days after the Effective Date of this Consent Decree, Defendant shall file with the State a notification and description of hazardous waste activity expressly related to the TMW performed at the Facility in accordance with Section 3010 of RCRA, 42 U.S.C. § 6930. A copy of the notification required by this Paragraph also must be submitted to the Associate Director of the Hazardous Waste Enforcement Branch, EPA Region 6, in accordance with Section XIII of this Consent Decree (Notices).

32. Within sixty (60) Days after the Effective Date of this Consent Decree, Defendant shall submit to the Director of ADEQ an application for and establish financial assurance for closure of the TMW and related storage units at the Facility in accordance with Section 3004(a) of RCRA, 42 U.S.C. § 6924(a), and 40 C.F.R. § 264, Subpart H. A copy of the application and documentation of the financial assurances required by this Paragraph also must be submitted to the Associate Director of the

Hazardous Waste Enforcement Branch, EPA Region 6, in accordance with Section XIII of this Consent Decree (Notices).

VI. REPORTING REQUIREMENTS

33. Defendant shall submit the following reports:

(a). Within 30 days after the end of each six month period following the Effective Date of this Consent Decree but before the final RCRA permit for the operation of the TMW is issued, and thirty (30) Days after the end of each calendar year thereafter until termination of this Decree pursuant to Section XVII, Defendant shall submit a report for the preceding six month period or calendar year, respectively, that summarizes the status of Defendant's application for a RCRA permit for the TMW and the status of compliance with the requirements of this Consent Decree.

b. The report also shall include a description of any non-compliance with the requirements of Section V of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days after Defendant becomes aware of the

cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section VIII of this Consent Decree (Force Majeure).

c. Whenever any violation of this Consent Decree or any other event affecting Defendant's performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify the Section Chief, Hazardous Waste Enforcement Section, Compliance Assurance and Enforcement Division, EPA, Region 6, 1445 Ross Avenue, Dallas, Texas 75202 by telephone to (214) 665-8006, by electronic or facsimile transmission to (214) 665-7446 as soon as possible, but no later than twenty-four (24) hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

d. All reports shall be submitted to the persons designated in Section XIII of this Consent Decree (Notices).

e. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

f. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by RCRA or its implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

g. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

VII. STIPULATED PENALTIES

34. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section VIII (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

35. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section IV of this Decree (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$3,000 per Day for each Day that the payment is late.

36. Compliance Milestones. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in the following subparagraphs:

a. Failure to within sixty (60) Days after the Effective Date of this Consent Decree, submit an application to the Director of ADEQ for a RCRA permit for the TMW as required by Paragraph 10 of this Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14 th Day
\$3,000	15 th through 30 th Day
\$10,000	31 st Day and beyond

b. Failure to prepare and submit trial burn and risk burn plans and perform trial and risk burns as required by Paragraphs 12-24 of this Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14 th Day
\$3,000	15 th through 30 th Day
\$10,000	31 st Day and beyond

c. Operation of the TMW without a final permit after the time allowed in Paragraph 26 in this Consent Decree:

Penalty Per Violation Per Day Period of Noncompliance

\$10,000	1st through 14th Day
\$25,000	15th Day and beyond

d. Failure to, within sixty (60) Days after the Effective Date of this Consent Decree, file with the State a notification and description of hazardous waste activity expressly related to the TMW operated at the Facility in accordance with Section 3010 of RCRA, 42 U.S.C. § 6930:

Penalty Per Violation Per Day Period of Noncompliance

\$1,000	1st through 14th Day
\$1,500	15 th through 30th Day
\$2,500	31st Day and beyond

e. Failure to, within sixty (60) Days after the Effective Date of this Consent Decree, establish financial assurance for or closure of the TMW and related storage units at the Facility in accordance with Section 3004(a) of RCRA, 42 U.S.C. § 6924(a), and 40 C.F.R. § 264, Subpart H.

Penalty Per Violation Per Day Period of Noncompliance

\$1,000	1st through 14 th Day
\$3,000	15 th through 30th Day
\$10,000	31 st Day and beyond

37. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VI of this Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14 th Day
\$1,500	15 th through 30th Day
\$2,500	31st Day and beyond

38. The stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

39. Defendant shall pay any stipulated penalty within sixty (60) Days of receiving the United States' written demand, unless Defendant invokes the Dispute Resolution procedures under Section IX (Dispute resolution). A demand for the payment of the stipulated penalties will identify the particular violation(s) to which the stipulated penalty relates and the penalty amount that the United States is demanding for each violation (as best as can be estimated).

40. The United States may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

41. Stipulated penalties shall continue to accrue as provided in Paragraph 38, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States within thirty (30) Days of the effective date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty (60) Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within sixty (60) Days of receiving the final appellate court decision.

42. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation

notices required by Paragraph 8, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

43. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

44. Subject to the provisions of Section XI of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Defendant's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of RCRA or its implementing regulations, Defendant shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

VIII. FORCE MAJEURE

45. "Force Majeure" for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of

Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts under the circumstances to fulfill the obligation. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential Force Majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

46. Defendant shall provide notice to the Section Chief, Hazardous Waste Enforcement Section, Compliance Assurance and Enforcement Division, EPA, Region 6, 1445 Ross Avenue, Dallas, Texas 75202 by telephone to (214) 665-8006, by electronic or facsimile transmission to (214) 665-7446 within seventy-two (72) hours of when Defendant first knew of a claimed Force Majeure event. Within fourteen (14) Days thereafter, Defendant shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; and

Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant shall include with any notice documentation supporting the claim that the delay was attributable to a Force Majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of Force Majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors had knowledge. For purposes of claiming a Force Majeure event related to Defendant's failure to receive a final RCRA permit for the TMW within one year after Defendant submits its initial application, Defendant must provide written notice and documentation to the Section Chief, Hazardous Waste Enforcement Section, Compliance Assurance and Enforcement Division, and the Chief of the Office of Regional Counsel, RCRA Enforcement Branch, EPA Region 6, not later than fourteen (14) Days after one year after Defendant submits its initial application that Defendant has not received a final RCRA permit for the TMW. Such written notice must provide an explanation and description of Defendant's submission of a timely and complete

application and other actions taken necessary to obtain such permit, but need not provide an explanation or description of the reasons for the delay or other matters referred to above in this Paragraph, if such reasons or other matters are beyond the knowledge of Defendant.

47. If EPA agrees that the delay or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

48. If EPA does not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, EPA will notify Defendant in writing of its decision.

49. If Defendant elects to invoke the dispute resolution procedures set forth in Section IX (Dispute Resolution), it shall do so no later than thirty (30) Days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the

delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that the Defendant complied with the requirements of Paragraphs 45 and 46, above. If the Defendant carries this burden, the delay at issue shall be deemed not to be a violation by the Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

IX. DISPUTE RESOLUTION

50. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

51. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant serves the United States with a written Notice of Dispute, in accordance with Section XIII of this Consent Decree (Notices). Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed forty-five (45) Days from the date the dispute arises, unless that period is modified by written agreement of the Parties. If the Parties cannot resolve a

dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within forty-five (45) Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

52. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

53. The United States shall serve its Statement of Position within forty-five (45) Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. If the United States does not accept Defendant's position, the United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

54. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States a motion requesting judicial resolution of the dispute. The motion must be filed within forty-five (45) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

55. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

56. The Court shall decide all disputes pursuant to applicable principles of law for resolving such disputes. In their initial filings with the Court under Paragraphs 55 and 56, the Parties shall state their respective positions as to the applicable standard of law for resolving the particular dispute. The Court shall not draw any inference nor establish any presumptions adverse to any Party as a result of invocation of this Section or the Parties' inability to reach agreement.

57. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 41. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section VII (Stipulated Penalties).

X. INFORMATION COLLECTION AND RETENTION

58. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Facility at all reasonable times, upon presentation of credentials, to:

a. monitor the progress of activities required under this Consent Decree;

b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;

c. obtain samples and, upon request, splits and results of any samples taken by Defendant or its representatives, contractors, or consultants;

d. obtain documentary evidence, including photographs and similar data; and

e. assess Defendant's compliance with this Consent Decree.

59. Upon request, EPA shall provide Defendant splits and results of any samples taken by EPA.

60. Until two years after the termination of this Consent Decree, Defendant shall retain (in paper or electronic form), and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Defendant shall make available to EPA copies of any documents, records, or other information required to be maintained under this Paragraph. Notwithstanding the provisions of this Paragraph, Defendant may request in writing permission from EPA to not preserve, to not maintain, or to destroy certain specified categories of documents. Defendant's obligations will

remain unchanged, however, unless and until EPA issues written approval of the request, which may or may not, in EPA's discretion, include a waiver of Defendant's obligations under this Paragraph.

61. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Defendant shall make any such documents, records, or other information available to EPA for inspection, copying or retention. Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, in lieu of providing documents, it shall notify the United States that such a claim is being made, and upon request, shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to

the requirements of this Consent Decree shall be withheld on grounds of privilege.

62. Defendant may also assert that information required to be provided under this Section is protected as CBI under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

63. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or State laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

64. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint and the Amended Complaint filed in this action through the Effective Date of this Consent Decree.

65. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 64. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under RCRA or its

implementing regulations, or under other federal or State laws, regulations, or permit conditions, except as expressly specified in Paragraph 64. The United States further reserves all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Defendant's Facility under Section 7003 of RCRA, 42 U.S.C. §§ 6973.

66. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Facility, the Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 64 of this Section.

67. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action

commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with RCRA, or with any other provisions of federal, State, or local laws, regulations, or permits.

68. This Consent Decree does not limit or affect the rights of Defendant or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

69. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree, or to release or waive any claim, cause of action, demand, or defense in law or equity that any party to this Consent Decree may have against any person(s) or entity not a party to this Consent Decree.

XII. COSTS

70. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the

civil penalty or any stipulated penalties due but not paid by Defendant.

XIII. NOTICES

71. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-7-1-08902

and

To EPA:

Associate Director
Compliance Assurance and Enforcement Division (RCRA Enforcement Division)
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202

Multimedia Planning and Permitting Division (RCRA Permits Division)
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75221

To Defendant:

Rineco Chemical Industries, Inc.
P.O. Box 729
Benton, Arkansas 72018

72. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

73. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XIV. EFFECTIVE DATE

74. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XV. RETENTION OF JURISDICTION

75. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections IX and XVI, or effectuating or enforcing compliance with the terms of this Decree.

XVI. MODIFICATION

76. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

77. Any disputes concerning modification of this Decree shall be resolved pursuant to Section IX of this Decree (Dispute Resolution) provided, however, that, instead of the burden of proof provided by Paragraph 56, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XVII. TERMINATION

78. After Defendant has complied with the requirements of Section V of this Consent Decree (Compliance Requirements), has thereafter maintained satisfactory compliance with this Consent Decree and the RCRA permit for the TMW issued by the Director of ADEQ for a period of one year, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

79. Following receipt by the United States of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree may be terminated, the

Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

80. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section IX of this Decree. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 52 of Section IX, until thirty (30) Days after service of its Request for Termination.

XVIII. PUBLIC PARTICIPATION

81. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

XIX. SIGNATORIES/SERVICE

82. Each undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

83. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XX. INTEGRATION

84. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supercedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it

represents, nor shall it be used in construing the terms of this Decree.

XXI. FINAL JUDGMENT

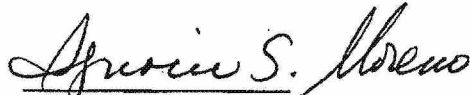
85. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and the Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

Dated and entered this 16th day of August, 2010.


UNITED STATES DISTRICT COURT JUDGE

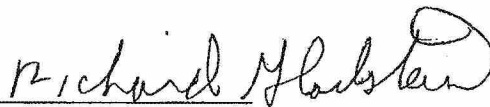
FOR THE UNITED STATES:

Dated: 4/27/10



IGNACIA S. MORENO
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice

Dated: 5/13/10

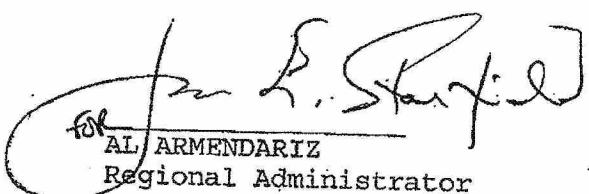


RICHARD GLADSTEN
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-1711


United States v. Rineco Chemical Industries, Inc.
Civil Action No. 4-07-CV 01189SWW
Consent Decree

FOR THE ENVIRONMENTAL PROTECTION AGENCY:

Date: 5/19/10


for AL ARMENDARIZ
Regional Administrator
U.S. Environmental Protection
Agency, Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

Date: 5/17/10


TERRY SYKES
RCRA Enforcement Branch
U.S. Environmental Protection
Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

FOR DEFENDANT RINECO CHEMICAL INDUSTRIES, INC.

Date:

12/7/2009

A handwritten signature in black ink, appearing to read "Larry Williams", written over a horizontal line.

LARRY WILLIAMS

Rineco Chemical Industries, Inc.
819 Vulcan Road
Benton, Arkansas 72015

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF ARKANSAS
WESTERN DIVISION**

FILED
U.S. DISTRICT COURT
EASTERN DISTRICT ARKANSAS

JAN 03 2012

JAMES W. McCORMACK, CLERK
By: _____ DEP CLERK

UNITED STATES OF AMERICA,)

Plaintiff,)

Civil Action No. 4-07-CV 01189SWW

RINECO CHEMICAL INDUSTRIES,)
INC.)

Defendant.)

ORDER ENTERING MODIFICATION OF CONSENT DECREE

Upon consideration of the United States' Unopposed Motion [doc.#105] for Entry of the Modification of the Consent Decree between the United States and the Rineco Chemical Industries, Inc. in the above-captioned case, there being no opposition thereto, and for good cause shown, the United States' Motion be and hereby is GRANTED and the Modification of the Consent Decree is entered. The Court has signed the Modification of the Consent Decree reflecting its approval of the proposed Modification of the Consent Decree.

SO ORDERED THIS 3rd DAY OF JANUARY 2012.

Dana Webster Wright
UNITED STATES DISTRICT JUDGE

FILED
U.S. DISTRICT COURT
EASTERN DISTRICT ARKANSAS

JAN 03 2012

JAMES W. McCORMACK, CLERK
By: _____
DEP CLERK

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF ARKANSAS
WESTERN DIVISION**

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	Civil Action No. 4-07-CV
v.)	01189SWW
)	
)	
RINECO CHEMICAL)	
INDUSTRIES, INC.)	
)	
Defendant.)	
)	

MODIFICATION OF CONSENT DECREE

On August 16, 2010, this Court entered Consent Decree (Doc. 102) between the United States and the Rineco Chemical Industries, Inc. ("Rineco") in the above-captioned case. In accordance with Paragraph 76 of the Consent Decree, the parties may modify the terms of the Consent Decree by written agreement of the parties. Where the modification constitutes a material change to the Decree, the modification shall be effective only upon approval by the Court.

Based on the agreement of the parties, and for good cause shown, the following Modification to the Consent Decree is approved:

Part 1. Interim Operating Conditions

The following interim operating restrictions and monitoring requirements (Interim Operating Conditions), which are in addition to any other requirements or restrictions in the Consent Decree, shall apply to Rineco's operations authorized under the Consent Decree between October 15, 2011, through the date that:

- (1) Rineco's authorization under the Consent Decree is terminated or ceases, as provided for under the Consent Decree or herein, or
- (2) a final RCRA Permit is issued (in which case the permit will provide operating conditions), whichever is earlier.

1. No later than October 31, 2011, Rineco shall submit to ADEQ and EPA proposed interim limits (with supporting data and calculations) on the TMW waste stream for the following parameters: waste feed limit, ash content, total chlorine and all risk assessment metals: antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium. Upon EPA's approval of such limits, and continuing through the date that Rineco conducts the Trial Burn referenced in Milestone 2, below, Rineco shall conduct daily representative sampling of its waste stream to demonstrate compliance with these interim TMW waste stream limits.

2. No later than January 1, 2012, Rineco shall install CO, HC, and Oxygen CEMS in each TOU unit, and no later than January

9, 2012, Rineco shall complete the calibration of each of the CEMS. Upon completion of the CEMS installation and calibration, Rineco shall use the CEMS to continuously measure CO, HC and Oxygen at each TOU stack. Rineco shall use the CEMS measurements to demonstrate compliance with the following emissions limits for each TOU: 100 ppm CO (by volume) and 10 ppm HC (by volume reported as propane), over an hourly rolling average, dry basis, corrected to 7 percent oxygen.

3. Beginning November 1, 2011, and continuing through the date Rineco submits the Notice of Compliance referenced in Milestone 3, below (the "Notice of Compliance"), Rineco shall conduct monthly sampling and analysis of dioxin/furans on all of the following "exit/discharge" points: (i) Venturi scrubbers V1 through V6 effluent stream, (ii) contents of Tank T-401, (iii) recovery metals sent to recycler, (iv) sludge from the wet gas separator, and (v) char or ash from the TMW.

4. Beginning February 1, 2012, and continuing through the date Rineco submits the Notice of Compliance, Rineco shall conduct monthly stack sampling for dioxins/furans at each TOU stack using Method 0023A to demonstrate compliance with the following emissions limit: 0.40 ng TEQ/dscm standard corrected to 7 percent oxygen.

5. Beginning February 1, 2012, and continuing through the date Rineco submits the Notice of Compliance, Rineco shall

conduct monthly sampling for particulate matter (PM) as follows:
Measurement for PM at each TOU stack will be conducted using
Method 5/202 to demonstrate compliance with the following
emissions limit: 0.013 gr/dscf standard corrected to 7 percent
oxygen.

6. Beginning on the dates specified in the attached Table F-4 (and any subsequent approved revisions of these dates), and continuing through the date Rineco completes the Trial Burn, Rineco shall comply with the Operating Parameter Limits ("OPL") and Automatic Waste Feed Cutoff ("AWFCO") limits specified in the attached Table F-4 (and any subsequent approved revisions of these requirements). Rineco shall specify total waste feed rate, metal and total chlorine feed limits in a table in its NOD response referenced in Milestone 1, below.

7. Beginning January 9, 2012 and continuing thereafter, Rineco must institute Automatic Waste Feed Cut Offs to immediately cease waste feed in the event the CO, or HC emissions limits referenced in Paragraph 2 above are not met.

8. Beginning January 9, 2012 and continuing thereafter, Rineco shall measure stack gas flow rate on a continuous basis.

9. Once the Trial Burn is conducted, Rineco will comply with the OPLs and AWFCO limits established during the Trial Burn until Rineco submits the Notice of Compliance.

10. Once Rineco submits the Notice of Compliance, through the time that a final RCRA Permit is issued, Rineco shall comply with the OPLs, AWFCO requirements and emission limits proposed in the Notice of Compliance.

11. No later than October 31, 2011, Rineco shall permanently shut down any TOU unit for which it will not perform a Trial Burn within the timeline specified in Milestone 2, below.

12. Rineco shall maintain all electronic operating records, hard copies of field logs, and sampling and analytical results for the operations during the period between October 15, 2011 and the issuance of a final RCRA Permit.

13. Rineco shall submit to both ADEQ and EPA, all monitoring, sampling and analytical results specified in Paragraphs 1, 3, 4, or 5, above, within 45 days of the monitoring or sampling.

14. Rineco shall submit to both EPA and ADEQ, all monitoring and AWFCO exceedences of the requirements of Paragraphs 2, 6, or 7, above, no later than the tenth (10th) day of each month for the preceding month.

15. All analyses required herein shall be performed by a laboratory pre-approved by ADEQ to perform such analyses.

Part 2. Interim Authorization and Milestones

Rineco's authorization under the Consent Decree after October 14, 2011, is expressly conditioned on Rineco completing each of the following milestone deadlines to the satisfaction of ADEQ and EPA.

Milestone 1. Submission, Revision and Approval of Required Plan

Rineco has submitted the following plans, dated September 29, 2011, to ADEQ and EPA:

1. Revised Trial Burn Plan
2. Waste Analysis Plan incorporating requirements specified in 40 CFR § 270.62(b)
3. Quality Assurance Project Plan
4. CEMS (or CMS) Performance Evaluation Plan
5. Start-up, Shut-down and Malfunction Plan

ADEQ/EPA will review these plans and issue only one Notice of Deficiency (NOD) to Rineco. Rineco must provide an approvable response to ADEQ and EPA within 30 days of receipt of the NOD. In the event that Rineco fails to submit a timely and good-faith approvable NOD response, Rineco's authorization to operate the TMW shall terminate on the NOD response deadline (30 days from the date of receipt of the NOD).

Milestone 2. Trial Burn

By no later than January 27, 2012, Rineco must complete the

Trial Burn and collect all necessary data for the purpose of risk assessment.

Rineco must stop feeding hazardous waste to the TMW as soon it knows during or anytime after the trial burn that it has exceeded the MACT EEE emissions limits or operating parameter limits (OPLs), or any emission limits or OPLs specified in the Interim Operating Conditions, above.

In the event that Rineco fails to complete the Trial Burn or to collect the data as described above by January 27, 2012, Rineco's authorization to operate the TMW shall terminate on January 27, 2012.

Milestone 3. Notice of Compliance (NOC)

By no later than April 27, 2012, Rineco must deliver to ADEQ and EPA a Notice of Compliance and the test results including the field data, the analytical data and any other data or calculations supporting the emissions calculation and the OPLs proposed in the Notice of Compliance.

In the event that Rineco fails to deliver a complete and approvable Notice of Compliance and testing results as described above, Rineco's authorization to operate the TMW shall terminate on April 27, 2012.

Milestone 4. Risk Assessment report

By no later than April 27, 2012, Rineco must deliver to ADEQ and EPA a complete and approvable Risk Assessment report

consistent with the Human Health Risk Assessment Protocol for Hazardous Waste Combustion facilities, OSWER, EPA-R-05-006, (September 2005) and Paragraph 28 of the Consent Decree.

In the event that Rineco fails to deliver a timely Risk Assessment report as described above, Rineco's authorization to operate the TMW shall terminate on April 27, 2012.

Milestone 5. Approval of NOC and Issuance of Final RCRA Permit

ADEQ and EPA will review the NOC and issue only one Notice of Deficiency (NOD) to Rineco. Rineco must provide an approvable response to ADEQ and EPA within 30 days of receipt of the NOD. In the event that Rineco fails to submit a timely and a good-faith approvable NOD response, Rineco's authorization to operate the TMW shall terminate on the deadline for such performance (30 days from the date of the NOD).

By no later than October 14, 2012, Rineco must complete all remaining permitting requirements and have a final RCRA permit authorizing it to operate the TMW. In the event that ADEQ does not issue a final RCRA permit to Rineco as described above by October 14, 2012, any remaining authorization under this Consent Decree to operate the TMW shall cease and Rineco shall stop operating the TMW, except as that time is enlarged under Paragraphs 29, 45, 46, 47, or 76 of the Consent Decree.

Part 3. Stipulated Penalties


In addition to any other remedy provided herein or in the Consent Decree, Rineco shall be liable for, and shall pay, stipulated penalties to the United States for the violation of the compliance milestones contained herein. Such stipulated penalties shall be subject to the procedures and requirements provided in Part VII of the Consent Decree.

The following stipulated penalties shall accrue per violation per day for each violation described below:

1. Operation of the TMW after failing to meet any of the Milestones (Milestones 1-5) provided herein:

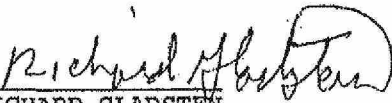
<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$10,000	1st through 14th day
\$25,000	15th day and beyond

Approved and entered this 3rd day of January, 2012.


UNITED STATES DISTRICT COURT JUDGE

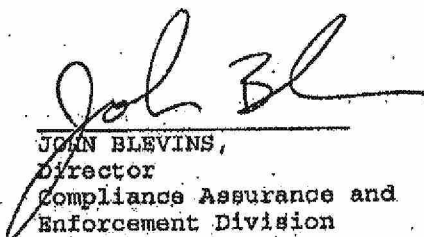
FOR THE UNITED STATES:

Dated: 12/14/11


RICHARD GLADSTEN
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-1711

FOR THE ENVIRONMENTAL PROTECTION AGENCY:

Date: 12.2.11


JOHN BLEVINS,
Director
Compliance Assurance and
Enforcement Division
U.S. Environmental Protection
Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

FOR DEFENDANT RINECO CHEMICAL INDUSTRIES, INC.

Date November 16, 2011



LARRY WILLIAMS
Rineco Chemical Industries, Inc.
819 Vulcan Road
Benton, Arkansas 72015

Appendix D-VII

Table F-4
TMW Trial Burn Operating Regimen

Item	Unit	Parameter	AWFCO limit	Target Value	Completion Schedule
1	Fugitives Control Vent (24" Duct)	Pressure (in. w.c.)	0	-0.5	10-24-2011
2	Feed Hopper / Conveyor Fugitive	Fugitive VOC Emissions (ppm)	0	0	11-11-2011
3	Cooling Screws #1, #2; Conveyor #1, #2; Shaker & Magnetic Separator	Fugitive VOC Emissions (ppm)	0	0	11-11-2011
4	Electric Heater (Electroscrow)	Exhaust Gas Max. Temperature (deg F) @ Active Venturi (V-3 or V-4)	1,500	1,100	10-15-2011
5	"	Exhaust Gas Min. Temperature (deg F) @ Active Venturi (V-3 or V-4)	400	400	10-15-2011
6	Venturi 1 thru 5 (V1 thru V5)	Min. Pressure Drop (Gas side) (in. w.c.) ¹	-12	0	10-24-2011
7	"	Min. Inlet Pressure (psf)	0	2	10-24-2011
8	"	Min. Blowdown Rate (total valve actuations/day) ²	4	4	10-24-2011
9	"	Min. Liquid Level (in.)	-2	0	11-11-2011
10	Venturi 6 (V6)	Min. Pressure Drop (Gas side) (in. w.c.) ³	-12	6	11-11-2011
11	"	Min. Inlet Pressure (psf)	0	2	11-11-2011
12	"	Min. Blowdown Rate (total valve actuations/day) ²	0	0	10-24-2011
13	"	Min. Liquid Level (in.)	-2	0	11-11-2011
14	"	Max. Exhaust Gas Temperature (deg F)	130	130	10-15-2011
15	Wet Dust Collector	Min. Pressure Drop (in. w.c.)	0.5	0.5	11-11-2011
16	TOU-102	Min. Combustion Temperature (deg F)	1,500	1,500	10-15-2011
17	"	Max. CO Exhaust Gas (ppm)	100	100	01-09-2012
18	"	Max. HC Exhaust Gas (ppm)	10	10	01-09-2012
19	"	Maximum Stack Gas Velocity (fps)	39	33	01-09-2012
20	TOU-103	Min. Combustion Temperature (deg F)	1,500	1,500	10-15-2011
21	"	Max. CO Exhaust Gas (ppm)	100	100	01-09-2012
22	"	Max. HC Exhaust Gas (ppm)	10	10	01-09-2012
23	"	Maximum Stack Gas Velocity (fps)	39	33	01-09-2012

NOTES:

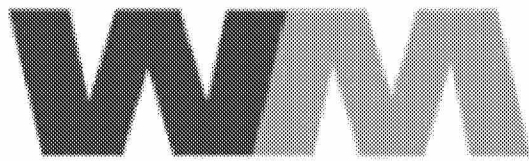
¹ Pressure drop (ΔP) is measured as pressure measured at cooling screws #1 or #2 [i.e., P SCREW_N or P SCREW_S, a or b] minus pressure measured at the inlet of V6 [i.e., P 12N_LINE].

² Valve actuations measured at valves XV Vx-PURGE (x = 1, 2, 3, 4, 5 and 6) (Re: Figure 029C).

³ Pressure drop (ΔP) is measured as pressure at the inlet of V6 [i.e., P 12N_LINE] minus pressure at the inlet to the blowers [i.e., P 3IN_LINE].

EXHIBIT 3

CWM Lake Charles Comprehensive Performance Test Plan for Thermal Desorption Unit,
November 2017 [with annotations by C. Palmer 7/15/2018]



WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT, INC.

LAKE CHARLES FACILITY

Annotations by C. Palmer 7/15/2018

**HAZARDOUS WASTE
OPERATING PERMIT
EPA ID No. LAD 000 777 201
AGENCY INTEREST No. 742**

**COMPREHENSIVE PERFORMANCE
TEST PLAN FOR
THERMAL DESORPTION UNIT**

NOVEMBER 2017

PREPARED BY:

pivotal
engineering

Coterie ENVIRONMENTAL

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Appendix A:	Quality Assurance Project Plan
Appendix B:	Continuous Monitoring Systems Performance Evaluation Test Plan

1.0 INTRODUCTION

This comprehensive performance test (CPT) plan is being submitted by Chemical Waste Management, Inc., (CWM) for the Thermal Desorption Unit (TDU) to be operated at the Lake Charles Facility. The TDU is subject to the Resource Conservation and Recovery Act (RCRA) standards codified in Title 40 Code of Federal Regulations (CFR) Part 264 Subpart X and Louisiana Administrative Code (LAC) Title 33 Part V Chapter 32. The applicable operating requirements for the TDU are specified in Section V.G of Hazardous Waste Operating Permit No. LAD000777201-0P-RN-MO-I.

This plan describes the initial CPT to be performed for the TDU. The plan is designed to demonstrate compliance with the performance standards established under 40 CFR Part 264 Subpart X and LAC 33:V.Chapter 32, as specified in Condition V.G.10.a of the permit. It is being submitted in accordance with Condition V.G.10.b.i.4 of the permit.

1.1 FACILITY OVERVIEW

The CWM Lake Charles Facility is a commercial hazardous waste treatment, storage, and disposal facility located on a 390-acre tract near Carlyss, Louisiana. John Brannon Road divides the facility into two parts: 270 acres to the west and 120 acres to the east. Incoming waste is currently treated as required and then disposed in Hazardous Waste Landfill Cell 8, located on the west side of John Brannon Road, adjacent to the other operational areas of the facility. CWM has added two new technologies to the current operations at the Lake Charles Facility. These new technologies offer CWM opportunities to treat waste and recover oil for resale. The two new systems consist of Oil Recovery Units and the TDU.

The street address of the CWM Lake Charles Facility is:

Chemical Waste Management, Inc.
Lake Charles Facility
7170 John Brannon Road
Carlyss, Calcasieu Parish, Louisiana 70665

All correspondence should be directed to the following facility contact:

Benjamin Dabadie
Environmental Manager
Chemical Waste Management, Inc.
Lake Charles Facility
7170 John Brannon Road
Sulphur, Louisiana 70665

Phone: 337-583-3676

Email: bdabadie@wm.com

1.2 UNIT OVERVIEW

The TDU is designed to remediate organic hydrocarbon waste streams by thermally volatilizing their hydrocarbon constituents such that they are separated from the solid fraction, processed, and captured as a recovered organic material. The TDU consists of a solids feed system, an indirectly heated rotary drum, a Vapor Recovery Unit (VRU), and a Thermal Oxidizer Unit (TOU). Gases exit the TOU and flow through a water quench, a venturi scrubber, and a packed bed scrubber. An induced draft (ID) fan downstream of the packed bed scrubber pulls the gases through the TOU and quench/scrubber system and pushes them out the stack.

1.3 REGULATORY OVERVIEW

The TDU is a thermal treatment unit, but it does not meet the definitions of an incinerator, boiler, or industrial furnace provided in 40 CFR § 260.10. The TDU does not use controlled flame combustion. Therefore, this unit is subject to 40 CFR Part 264 Subpart X and LAC 33:V.Chapter 32. 40 CFR § 264.601 and LAC 33:V.3203 require that Subpart X permit terms and provisions include those requirements of 40 CFR Part 264 Subparts I through O and Subparts AA through CC, 40 CFR Part 270, 40 CFR Part 63 Subpart EEE, and 40 CFR Part 146 that are appropriate for the miscellaneous unit being permitted. The Louisiana Department of Environmental Quality (LDEQ) has determined that some of the performance standards of 40 CFR Part 63 Subpart EEE, Hazardous Waste Combustor National Emission Standards for Hazardous Air Pollutants (HWC NESHAP), are appropriate for the TDU.

The applicable performance standards for the TDU are stated in Condition V.G.10.a of the permit. The applicable emission standards for the TDU are summarized in Table 1-1 and are described below:

- Dioxins and furans (D/F) emissions shall not exceed 0.20 nanograms toxic equivalence per dry standard cubic meter (ng TEQ/dscm) corrected to seven percent oxygen.
- Mercury emissions shall not exceed 8.1 micrograms per dry standard cubic meter (µg/dscm) corrected to seven percent oxygen.
- Cadmium and lead combined, referred to as semivolatile metals (SVM), emissions shall not exceed 10 µg/dscm corrected to seven percent oxygen.
- Arsenic, beryllium, and chromium combined, referred to as low volatile metals (LVM), emissions shall not exceed 23 µg/dscm corrected to seven percent oxygen.
- Hydrogen chloride and chlorine combined (HCl/Cl₂) emissions shall not exceed 21 parts per million by volume on a dry basis (ppmv dry), expressed as a chloride equivalent and corrected to seven percent oxygen.
- Particulate matter (PM) emissions shall not exceed 0.08 grains per dry standard cubic foot (gr/dscf) corrected to seven percent oxygen.
- Carbon monoxide (CO) emissions shall not exceed 100 ppmv dry corrected to seven percent oxygen.

In addition to the emission standards, Condition V.G.10.b.i.2 of the permit requires that CWM demonstrate compliance with the destruction and removal efficiency (DRE) standard of 40 CFR § 63.1219(c)(1), which requires a DRE of 99.99 percent or greater for each designated principal organic hazardous constituent (POHC).

TABLE 1-1
APPLICABLE EMISSION STANDARDS FOR THERMAL DESORBER UNIT

PARAMETER	UNITS ¹	EMISSION STANDARD
Dioxins and furans	ng TEQ/dscm	0.20
Mercury	µg/dscm	8.1
Semivolatile metals	µg/dscm	10
Low volatile metals	µg/dscm	23
Hydrogen chloride and chlorine	ppmv dry	21
Particulate matter	gr/dscf	0.08
Carbon monoxide	ppmv dry	100
Destruction and removal efficiency	%	99.99

¹ Emission standards corrected to seven percent oxygen.

1.4 COMPREHENSIVE PERFORMANCE TEST OVERVIEW

The CPT is designed to demonstrate compliance with the emission standards being included as applicable requirements in the permit. The CPT will also establish the operating parameter limits (OPLs) required by Condition V.G.11 of the permit. One test condition will be performed for the TDU during the CPT. The CPT condition will be performed to demonstrate compliance with the DRE standard and the D/F, mercury, SVM, LVM, HCl/Cl₂, PM, and CO emission standards while operating the TDU at the maximum total hazardous waste feed rate, the minimum TOU temperature, and the maximum flue gas flow rate. The venturi scrubber will be operated at the minimum pressure drop, and the packed bed scrubber will be operated at the minimum liquid to gas ratio, the minimum liquid flow rate, and the minimum liquid pH.

This CPT is being coordinated by Coterie Environmental LLC (Coterie) under the direction of CWM personnel. Coterie is responsible for the test protocol development and implementation and will oversee the TDU's operations and the stack sampling activities during the test program. A stack sampling contractor will perform all of the stack sampling for the test program. This contractor will be responsible for all emissions samples collected during the test program, with oversight by Coterie. A spiking contractor will provide waste spiking services during the test program. The emissions samples will be sent to qualified laboratories for analysis. Additional information on the project team roles and responsibilities is provided in the quality assurance project plan (QAPP) in Appendix A.

Prior to the CPT, CWM will perform the continuous monitoring systems (CMS) performance evaluation test (PET). The goal of the CMS PET is to demonstrate that the CMS associated with the TDU are operating in compliance with the permit. During the CMS PET, CWM will verify that each CMS is correctly installed, calibrated, and operational. A copy of the CMS PET plan is included as Appendix B.

CWM anticipates conducting the CPT soon after initial introduction of hazardous waste to the TDU. The CPT will be conducted within the first 720 hours of hazardous waste operations. An additional 720 hours of operation may be requested if circumstances prevent CWM from performing the CPT within the allotted time. The CPT is expected to take three days. The CPT report will be submitted within 90 days after completion of all emissions testing, or an extension will be requested.

1.5 OPERATING PARAMETER LIMITS OVERVIEW

CWM intends to establish the applicable OPLs required by Condition V.G.11 of the permit during the CPT. The target OPLs are summarized in Table 1-2 and are discussed in detail in Section 2. The OPLs will be established as hourly rolling averages (HRAs) or instantaneous values.

TABLE 1-2
TARGET OPERATING PARAMETER LIMITS SUMMARY

OPERATING PARAMETER	PERMIT CONDITION	AVERAGING PERIOD	TARGET LIMIT
Maximum hazardous waste feed rate	V.G.11.a.i	HRA	10 tph
Maximum treatment drum pressure	V.G.11.a.ii	Instantaneous ¹	0 in. w.c.
Minimum thermal oxidizer unit temperature	V.G.11.a.iii	HRA	1,400°F
Maximum flue gas flow rate	V.G.11.a.vi	HRA	4,000 acfm
Minimum venturi scrubber pressure drop	V.G.11.a.vii	HRA	35 in. w.c.
Minimum packed bed scrubber liquid to gas ratio	V.G.11.a.viii	HRA	10 gal/Macf
Minimum packed bed scrubber liquid flow rate	V.G.11.a.ix	HRA	40 gpm
Minimum packed bed scrubber liquid pH	V.G.11.a.x	HRA	5.0
Minimum rotary drum temperature	V.G.11.b.1	None ²	500°F
Maximum mercury feed rate	V.G.11.b.2	None ²	5.0 lb/hr
Maximum chlorine feed rate	V.G.11.b.3	None ²	80 lb/hr
Maximum semivolatile metals feed rate	V.G.11.b.4	None ²	200 lb/hr
Maximum low volatile metals feed rate	V.G.11.b.5	None ²	300 lb/hr

¹ The automatic cutoff for this instantaneous limit will be established with a 15-second delay.

² These parameters do not require any averaging period and are not part of the automatic waste feed cutoff system.

1.6 REFERENCE DOCUMENTS

Reference documents that have been used in developing this plan include the following:

- LDEQ, Final Modified Hazardous Waste Operating and Post-Closure Permit, Permittee: Chemical Waste Management, Inc., Lake Charles Facility, EPA ID Number: LAD000777201, Permit Number: LAD000777201-OP-RN-MO-1
- United States Environmental Protection Agency (USEPA), *Final Technical Support Document for HWC MACT Standards, Volume IV: Compliance With the HWC MACT Standards*, July 1999;
- USEPA, *Guidance on Setting Permit Conditions and Reporting Trial Burn Results*, January 1989;
- USEPA, *Methods Manual for Compliance With the BIF Regulations*, Appendix IX, 40 CFR Part 266;
- USEPA, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors, 40 CFR Part 63, Subpart EEE, September 30, 1999, and as amended through October 28, 2008;
- USEPA, New Source Performance Standards, Test Methods and Procedures, Appendix A, 40 CFR Part 60; and
- USEPA, *Test Methods for Evaluating Solid Wastes Physical/Chemical Methods, Third Edition*, 1986 and updates (SW-846).

1.7 COMPREHENSIVE PERFORMANCE TEST ORGANIZATION

The remaining sections of the plan provide the following information:

- Section 2 presents a discussion on the target OPLs for the TDU;
- Section 3 presents information on the TDU's feedstreams;
- Section 4 presents a detailed engineering description of the TDU;
- Section 5 presents a description of the continuous monitoring systems (CMS);
- Section 6 presents a description of the test operating conditions;
- Section 7 presents a summary of the test sampling and analysis procedures;
- Appendix A includes the QAPP; and
- Appendix B includes the CMS PET plan.

1.8 DOCUMENT REVISION HISTORY

The original version of this plan was submitted in November 2017. The nature and date of any future revisions will be summarized in Table 1-3.

TABLE 1-3
DOCUMENT REVISION HISTORY

REVISION	DATE	DESCRIPTION OF CHANGES
0	November 2017	Original submittal

2.0 OPERATING PARAMETER LIMITS

Condition V.G.11 of the permit requires CWM to monitor a number of process parameters to demonstrate continued compliance with the emission standards. The allowable limits for most of the process parameters are determined from the results of the CPT. The CPT has been designed to demonstrate performance of the TDU at conditions representative of the extreme range of normal conditions. The OPLs that CWM plans to demonstrate are discussed below and are summarized in Table 2-1.

TABLE 2-1
TARGET OPERATING PARAMETER LIMITS

OPERATING PARAMETER	UNITS	TARGET LIMIT
Maximum hazardous waste feed rate	tph	10
Maximum treatment drum pressure	in. w.c.	0
Minimum thermal oxidizer unit temperature	°F	1,400
Maximum flue gas flow rate	acfm	4,000
Minimum venturi scrubber pressure drop	in. w.c.	35
Minimum packed bed scrubber liquid to gas ratio	gal/Macf	10
Minimum packed bed scrubber liquid flow rate	gpm	40
Minimum packed bed scrubber liquid pH	- - -	5.0
Minimum rotary drum temperature	°F	500
Maximum mercury feed rate	lb/hr	5.0
Maximum chlorine feed rate	lb/hr	80
Maximum semivolatile metals feed rate	lb/hr	200
Maximum low volatile metals feed rate	lb/hr	300

add condenser outlet temp. every 10-deg C approximately doubles mercury input rate to the TOU. Also doubles individual condensible hydrocarbon compounds, but that is compound specific. Should also be AWFCO

2.1 MAXIMUM HAZARDOUS WASTE FEED RATE

A limit on maximum hazardous waste feed rate is required by Condition V.G.11.a.i of the permit. The maximum hazardous waste feed rate OPL will be determined using the average of the maximum HRAs from the CPT runs. The maximum total hazardous waste feed rate OPL will be established on an HRA basis.

CWM will establish the OPL for maximum hazardous waste feed rate during the CPT condition. The target value for maximum hazardous waste feed rate to the TDU is 10 tons per hour (tph).

2.2 MAXIMUM TREATMENT DRUM PRESSURE

Condition V.G.11.a.i of the permit requires that the pressure in the treatment drum of the TDU be maintained below 0 inches water column (in. w.c.) when hazardous waste is in the unit. The pressure

must be monitored continuously. An automatic waste feed cutoff (AWFCO) must be initiated if the pressure exceeds 0 in. w.c. for more than fifteen seconds.

2.3 MINIMUM THERMAL OXIDIZER UNIT TEMPERATURE

A limit on minimum TOU temperature is required by Condition V.G.11.a.iii of the permit. The minimum TOU temperature OPL will be determined using the average of the CPT run averages. The minimum TOU temperature OPL will be established on an HRA basis.

CWM will establish the OPL for minimum TOU temperature during the CPT condition. The target value for minimum TOU temperature is 1,400 degrees Fahrenheit (°F).

2.4 MAXIMUM FLUE GAS FLOW RATE

A limit on maximum flue gas flow rate is required by Condition V.G.11.a.vi of the permit. The maximum flue gas flow rate OPL will be determined using the average of the maximum HRAs from the CPT runs. The maximum flue gas flow rate OPL will be established on an HRA basis.

CWM will establish the OPL for maximum flue gas flow rate during the CPT condition. The target value for maximum flue gas flow rate is 4,000 actual cubic feet per minute (acfm).

2.5 MINIMUM VENTURI SCRUBBER PRESSURE DROP

A limit on minimum scrubber pressure drop is required by Condition V.G.11.a.vii of the permit. CWM will monitor this parameter at the venturi scrubber. The minimum venturi scrubber pressure drop OPL will be determined using the average of the CPT run averages. The minimum venturi scrubber pressure drop OPL will be established on an HRA basis.

CWM will establish the OPL for minimum venturi scrubber pressure drop during the CPT condition. The target value for minimum venturi scrubber pressure drop is 35 in. w.c.

2.6 MINIMUM PACKED BED SCRUBBER LIQUID TO GAS RATIO

A limit on minimum scrubber liquid to gas ratio is required by Condition V.G.11.a.viii of the permit. CWM will monitor this parameter at the packed bed scrubber. The minimum packed bed scrubber liquid to gas ratio OPL will be determined using the average of the CPT run averages. The minimum packed bed scrubber liquid to gas ratio OPL will be established on an HRA basis.

CWM will establish the OPL for minimum packed bed scrubber liquid to gas ratio during the CPT condition. The target value for minimum packed bed scrubber liquid to gas ratio is 10 gallons per thousand actual cubic feet (gal/Macf).

2.7 MINIMUM PACKED BED SCRUBBER LIQUID FLOW RATE

A limit on minimum scrubber liquid flow rate is required by Condition V.G.11.a.ix of the permit. CWM will monitor this parameter at the packed bed scrubber. The minimum packed bed scrubber liquid flow rate OPL will be determined using the average of the CPT run averages. The minimum packed bed scrubber liquid flow rate OPL will be established on an HRA basis.

CWM will establish the OPL for minimum packed bed scrubber liquid flow rate during the CPT condition. The target value for minimum packed bed scrubber liquid flow rate is 40 gallons per minute (gpm).

2.8 MINIMUM PACKED BED SCRUBBER LIQUID PH

A limit on minimum scrubber liquid pH is required by Condition V.G.11.a.x of the permit. CWM will monitor this parameter at the packed bed scrubber. The minimum packed bed scrubber liquid pH OPL will be determined using the average of the CPT run averages. The minimum packed bed scrubber liquid pH OPL will be established on an HRA basis.

CWM will establish the OPL for minimum packed bed scrubber liquid pH during the CPT condition. The target value for minimum packed bed scrubber liquid pH is 5.0.

2.9 MINIMUM ROTARY DRUM TEMPERATURE

A limit on minimum rotary drum temperature is required by Condition V.G.11.b.i of the permit. The minimum rotary drum temperature OPL is established by the permit as 500°F. The minimum rotary drum temperature OPL will be established on an HRA basis.

2.10 MAXIMUM MERCURY FEED RATE

A limit on maximum mercury feed rate is required by Condition V.G.11.b.2 of the permit. The maximum mercury feed rate OPL will be determined using the average of the CPT run averages. The maximum mercury feed rate will not be monitored continuously and will not be part of the AWFCO system.

CWM will establish the OPL for maximum mercury feed rate during the CPT condition. The target value for maximum mercury feed rate is 5.0 pounds per hour (lb/hr).

← no extrapolation

2.11 MAXIMUM CHLORINE FEED RATE

A limit on maximum chlorine feed rate is required by Condition V.G.11.b.3 of the permit. The maximum chlorine feed rate OPL will be determined using the average of the CPT run averages. The maximum chlorine feed rate will not be monitored continuously and will not be part of the AWFCO system.

CWM will establish the OPL for maximum chlorine feed rate during the CPT condition. The target value for maximum chlorine feed rate is 80 lb/hr.

2.12 MAXIMUM SEMIVOLATILE METALS FEED RATE

A limit on maximum SVM feed rate is required by Condition V.G.11.b.4 of the permit. The maximum SVM feed rate OPL will be determined using the average of the CPT run averages. The maximum SVM feed rate will not be monitored continuously and will not be part of the AWFCO system.

no extrapolation limit, needs 3x
or 80% of emission limit max

CWM will establish the OPL for maximum SVM feed rate during the CPT condition. The maximum SVM feed rate OPL will be determined by extrapolating from the average of the test run averages (See Section 6.3). The target value for the extrapolated maximum SVM feed rate is 200 lb/hr.

2.13 MAXIMUM LOW VOLATILE METALS FEED RATE

A limit on maximum LVM feed rate is required by Condition V.G.11.b.5 of the permit. The maximum LVM feed rate OPL will be determined using the average of the CPT run averages. The maximum LVM feed rate will not be monitored continuously and will not be part of the AWFCO system.

no extrapolation limit, needs 3x
or 80% of emission limit max

CWM will establish the OPL for maximum LVM feed rate during the CPT condition. The maximum LVM feed rate OPL will be determined by extrapolating from the average of the test run averages (See Section 6.3). The target value for the extrapolated maximum LVM feed rate is 300 lb/hr.

3.0 FEEDSTREAM CHARACTERIZATION

CWM will remediate organic hydrocarbon waste streams in the TDU. The TDU and TOU will be fired on natural gas.

3.1 WASTE STREAMS

Target waste streams for processing in the TDU include waste spent catalyst, crude oil tank bottoms, tank bottoms sludge, centrifuge solids, and other hydrocarbon contaminated materials. These waste streams may carry many different hazardous waste codes. Table 3-1 presents the typical characteristics of the target waste streams.

TABLE 3-1
TARGET WASTE STREAMS

PARAMETER	UNITS	TYPICAL
Organic content	% wt	0 – 10
Chlorine	mg/kg	0 – 4,000
Arsenic	mg/kg	0 – 5,000
Beryllium	mg/kg	0 – 5,000
Cadmium	mg/kg	0 – 5,000
Chromium	mg/kg	0 – 5,000
Lead	mg/kg	0 – 5,000
Mercury	mg/kg	0 – 260

3.2 NATURAL GAS

Natural gas will be fed to the TDU and TOU. The natural gas is not expected to contain any regulated constituents in greater than trace quantities.

3.3 WASTE CHOSEN FOR THE COMPREHENSIVE PERFORMANCE TEST

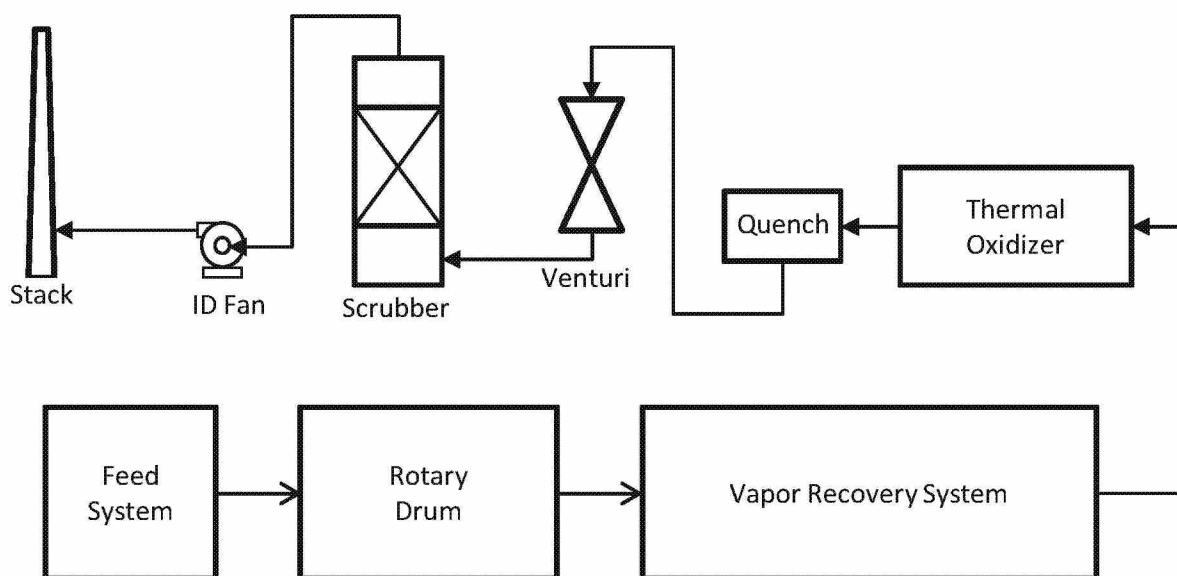
The waste streams for the CPT condition will be representative of the typical waste streams fed to the TDU. The actual waste streams will be chosen based on the current waste inventory at the time of the CPT. Spiking will be used to ensure that the CPT feed materials will provide worst case conditions for metals and chlorine loadings.

4.0 ENGINEERING DESCRIPTION

The TDU is designed to remediate organic hydrocarbon waste streams by thermally volatilizing their hydrocarbon constituents such that they are separated from the solid fraction, processed, and captured as a recovered oil. The TDU consists of a solids feed system, an indirectly heated rotary drum, a VRU, and a TOU. Gases exit the TOU and flow through a water quench, a venturi scrubber, and a packed bed scrubber. An ID fan downstream of the packed bed scrubber pulls the gases through the TOU and quench/scrubber system and pushes them out the stack.

Figure 4-1 provides a general process schematic diagram of the system.

**FIGURE 4-1
PROCESS SCHEMATIC**



4.1 SOLIDS FEED SYSTEM

The feed material is received by truck and offloaded into four below grade storage pits (T-701, T-702, T-703, and T-704) where it is homogenized and loaded directly into the TDU feed hopper (F-1101), by way of specialized equipment. The live bottom feed hopper is equipped with a twin screw feed hopper screw conveyor (CO-1101) driven by two synchronous variable frequency drives. This allows material to be discharged from the hopper at a controlled rate. The feed hopper is designed for a maximum throughput rate of 10 tph. Material discharging from the hopper enters directly into the inclined TDU feed conveyor (CO-1102) through the feed conveyor chute (CH-1101). The feed conveyor transfers the feedstock to the TDU feed screw (CO-1203) through the double gate TDU inlet valve (CO-1201) and slide

gate valve (CO-1202). The TDU inlet valve and TDU feed screw coupled with the rotary seal system are designed to minimize and prevent air leakage into the TDU processing chamber.

4.2 ROTARY DRUM

The TDU feed screw conveyor (CO-1203) inserts the feedstock directly into the indirectly heated TDU rotary drum (D-1201). As the unit is indirect fired, the burner flame and products of fuel combustion do not contact the feed material or vapors generated inside the rotary drum. The 56-foot long drum has an inner diameter of seven feet.

The TDU furnace built around the rotary drum is heated by four burners (B-1701,2,3,4), which are designed to fire natural gas. Each burner system is furnished complete with a dedicated combustion blower (K-1702,3,4,5) and fuel train.

As the drum rotates, the hydrocarbon laden material exposed to the metal surface of the drum is continuously turned to facilitate the transfer of heat from the heated furnace through the kiln wall to the feed material. Drum chains installed inside the rotary drum serve to break up any larger clumps of materials and prevent material from accumulating on the drum wall.

The typical operating temperature range of the rotary drum is 800 to 1,100°F. This is achieved under anaerobic (low oxygen) conditions thereby preventing oxidation of the hydrocarbon compounds.

The material inlet and outlet openings of the rotary drum are regulated by double chamber pneumatically operated airlock valves (inlet valve CO-1201 and discharge valve CO-1205). The drum is furnished with a rotary graphite seal on the feed end and a flexible leaf seal arrangement constructed with tempered steel on the discharge end. The flexible leaf seals are used to prevent air intrusion while still accommodating growth of the drum from thermal expansion. These features are designed to minimize air leakage into the rotary drum and downstream plant components. The process blower (K-1301 A/B) and associated venturi control valve (FCV-1302) maintain a negative vacuum pressure inside the rotary drum.

CPMS for oxygen?? compliance with NFPA? should be AWFCO

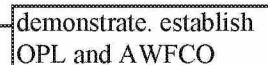
4.3 VAPOR RECOVERY SYSTEM

Vapors from the rotary drum are routed to the VRU for collection by way of the vapor transport conveyor (CO-1301). Process gases (hydrocarbons and water vapor) exiting the TDU are recovered in two ways: as liquids/oils and light end hydrocarbon gases. Liquids, oils, and water are collected in the VRU through condensation. Hydrocarbon vapors that do not condense to liquids are scrubbed and are sent to the TOU for destruction.

In the VRU, cool process water is pumped to the pre-scrubber (E-1301) via the process water pump (P-1401 A/B), where it is injected through a series of water nozzles. This water mixes with the hot process gases from the rotary drum, cooling the gases to approximately 130°F. As the gas stream is

cooled, the organics condense. This is the primary point of vapor recovery in the system. The condensed organics mix with the process cooling water and drain by gravity into an integrated sump tank below called the interceptor (F-1301). The function of the interceptor is to serve as a primary collection and separation point of process water, organics, and sludge. The ventilation blower (K-1302) vents any vapors emanating from the interceptor to the TOU.

The partially cooled vapors that pass through the pre-scrubber (E-1301) are processed further by passing through a variable throat venturi valve (FCV-1302), where additional water is sprayed onto the gas stream to further cool and remove solid particles from the gas stream. The gases exiting the venturi unit pass through the separator (E-1302) and two demister modules (V-1301,2), where water and oil droplets are further removed from the gas stream. The vapor stream then enters the tube and shell heat exchanger (E-1303), where the gas temperature is reduced to approximately 60°F. This promotes additional vapor condensation including water and organics.



demonstrate. establish
OPL and AWFCO

4.4 PROCESS BLOWER

Upon exiting the tube and shell heat exchanger, the gas is drawn into the process blower (K-1301 A/B). The process blower provides the primary motive force for gases through the rotary drum and VRU.

4.5 THERMAL OXIDIZER UNIT

The non-condensable gases from the VRU are routed to the TOU for final treatment prior to discharge to the atmosphere. Vapors enter the TOU through a fail closed automatic on/off valve (FCV-1603) and subsequent flame arrestor (FA-1602). The TOU has a nominal volume of 460 cubic feet.

The TOU is heated with the TOU burner (B-1601), a natural gas fired burner with the option to burn diesel. The burner is rated for up to four million British thermal units per hour (MMBtu/hr) thermal input. The TOU is equipped with its own independent burner management system (BMS).

The TOU combustion blower (K-1601) provides combustion air for the TOU burner. In addition, a TOU dilution blower (K-1602) has been provided to ensure that adequate oxygen is available for combustion of the non-condensable gases and that temperature in the TOU is controlled.

4.6 QUENCH

The combustion gases exit the TOU and enter the quench chamber. The quench chamber cools the gases to the adiabatic saturation point. The quench chamber is a vertical spray chamber with four spray nozzles. One nozzle provides fresh water and the other three provide recirculated water from the sump.

4.7 VENTURI SCRUBBER

The cooled gases exit the quench chamber and flow through a Verantis Environmental Solutions Group (Verantis) Model VTV-50 standard throat venturi scrubber for removal of particulates. The vertical flow venturi scrubber is designed to operate at a pressure drop of up to 50 in. w.c.

4.8 PACKED BED SCRUBBER

The gases from the venturi scrubber enter the packed bed scrubber tangentially, in the lower section. The packed bed scrubber is designed to remove acid gases. The Verantis Model SPT-36-120 packed bed scrubber is a cylindrical vessel, three feet in diameter. The flue gases flow upward through a packed bed section and a demister section. The packed bed consists of a 10-foot deep bed of packing. The gases flow counter-current to the scrubber liquid flow that is introduced above the packed bed. A caustic solution is introduced into the scrubber liquid recycle loop as a reagent. The acid gases react with the caustic solution and form salts that are continuously purged in the packed bed scrubber blowdown.

4.9 INDUCED DRAFT FAN

The ID fan maintains a negative pressure in the TOU and quench/scrubber system. The ID fan is located after the packed bed scrubber. The ID fan is rated for 4,000 acfm at 45 in. w.c. The ID fan is equipped with a 75-horsepower motor and variable frequency drive for speed adjustment.

4.10 STACK

The flue gases from the ID fan are discharged through the stack to the atmosphere. The stack is 35 feet high with an internal diameter of 1.5 feet. The stack is fitted with sampling ports.

5.0 CONTINUOUS MONITORING SYSTEMS

Monitoring equipment for the TDU include systems for process control and for stack gas analysis. This equipment will enable the operators to maintain safe operation in compliance with the OPLs. This section of the plan provides an overview of the CMS associated with the TDU. These CMS are comprised of continuous process monitoring systems (CPMS) and continuous emissions monitoring systems (CEMS).

5.1 CONTINUOUS PROCESS MONITORING SYSTEMS

Various CPMS are required for the TDU to document compliance with the required OPLs. These monitors sample regulated operating parameters without interruption and evaluate the detector's response at least once every 15 seconds. The distributed control system (DCS) collects the data, calculates and records one-minute average (OMA) values for each required operating parameter, and calculates and records the appropriate rolling averages. Table 5-1 provides a description of each CPMS.

TABLE 5-1
CONTINUOUS PROCESS MONITORING SYSTEMS

MEASURED PARAMETER	INSTRUMENT DESCRIPTION
Hazardous waste feed rate	Flow meter
Rotary drum pressure	Pressure transmitter
Rotary drum temperature	Thermocouple and temperature transmitter
Thermal oxidizer unit temperature	Thermocouple and temperature transmitter
Flue gas flow rate	Flow meter
Venturi scrubber pressure drop	Differential pressure transmitter
Packed bed scrubber liquid flow rate	Flow meter
Packed bed scrubber liquid pH	pH transmitter and electrode

5.2 CONTINUOUS EMISSIONS MONITORING SYSTEMS

using only CO for CEMS requires THC during the CPT

CWM will monitor the concentrations of CO and oxygen in the stack gas. CWM will utilize a non-dispersive infrared analyzer for CO. The analyzer will be configured with two spans: a zero to 200 ppmv dry low-level span and zero to 3,000 ppmv high-level span. CWM will continuously correct these CO concentration measurements to seven percent oxygen. CWM will perform this correction with measurements of the stack gas oxygen concentration that will be collected by a paramagnetic analyzer. The analyzer will be configured with a single span of zero to 25 percent oxygen by volume on a dry basis.

The CEMS will be maintained as outlined in 40 CFR Part 266 Appendix IX, using a specified maintenance routine that includes:

-
- Routine maintenance;
 - Daily auto calibration checks;
 - Quarterly calibration error (CE) tests; and
 - Annual relative accuracy test audits (RATAs).

Any problems identified by the above tests will be remedied through corrective action measures specific to the problem encountered.

5.3 AUTOMATIC WASTE FEED CUTOFF SYSTEM

CWM will operate the TDU with a functioning system that immediately and automatically cuts off the hazardous waste feed when operating or emission limits are exceeded. Any malfunctions of the monitoring equipment or AWFCO system will also initiate an immediate and automatic cutoff of hazardous waste feed. The following OPLs will be linked to the AWFCO system:

- Maximum hazardous waste feed rate;
- Maximum treatment drum pressure;
- Minimum TOU temperature;
- Maximum flue gas flow rate;
- Minimum venturi scrubber pressure drop;
- Minimum packed bed scrubber liquid to gas ratio;
- Minimum packed bed scrubber liquid flow rate;
- Minimum packed bed scrubber liquid pH; and
- Maximum stack gas CO concentration corrected to seven percent oxygen.



maximum condenser exhaust temperature

All parameters will be linked to the AWFCO system on an HRA basis, except for treatment drum pressure, which will be linked on an instantaneous basis with a 15-second delay. An AWFCO will be initiated by the DCS. An AWFCO will stop the flow of waste to the TDU. The TOU and quench/scrubber system will continue to operate during an AWFCO.

5.4 EMERGENCY SHUTDOWN SYSTEM

Emergency shutdown features are included to protect the equipment in the event of a malfunction. During an emergency shutdown, all waste feeds and fuel feeds are stopped. The trigger points for an emergency shutdown have been set independent of regulatory test conditions. These limits are based on equipment design and operating specifications and are considered good operating practices.

The following conditions will trigger a complete shutdown of the TDU:

- High oxygen content in rotary drum;
- High rotary drum temperature;



so they have an O2 analyzer and "interlock" that is like an AWFCO. what is the setpoint. is it permit enforceable.

-
- High rotary drum pressure;
 - High TOU temperature;
 - High TOU pressure;
 - High VRU temperature; and
 - Loss of compressed air supply.

is this the maximum condenser exhaust temperature? make it an OPL and AWFCO. Tie to three run average from CPT. Condenser temp strongly affects Hg emissions and hydrocarbon load on the TO. Every 10-deg C increase doubles Hg emission rate and condensible hydrocarbon input to the TO.

6.0 COMPREHENSIVE PERFORMANCE TEST OPERATIONS

CWM intends to perform one test condition to demonstrate that the TDU operates in conformance with the applicable performance standards stated in Condition V.G.10 of the permit. This section of the plan establishes the TDU operations that will be demonstrated during the testing. In addition, the preparation of materials to be fed during the testing, the amount of waste to be used, and a schedule for the testing are presented here.

6.1 TEST CONDITION

The CPT condition is designed to demonstrate operations of the TDU at the maximum total hazardous waste feed rate, the minimum TOU temperature, and the maximum flue gas flow rate. During the condition, CWM will demonstrate compliance with the DRE standard and the D/F, mercury, SVM, LVM, HCl/Cl₂, PM, and CO emission standards. Triplicate sampling runs will be performed for the condition. All operating conditions presented in this plan are calculated values; the actual conditions observed during the test may vary slightly from these values.

The following OPLs will be established during the CPT condition:

- Maximum hazardous waste feed rate;
- Minimum TOU temperature;
- Maximum flue gas flow rate;
- Minimum venturi scrubber pressure drop;
- Minimum packed bed scrubber liquid to gas ratio;
- Minimum packed bed scrubber liquid flow rate; and
- Minimum packed bed scrubber liquid pH.

During this condition, spiking will be performed to provide the POHC feed rate necessary for the DRE demonstration and to provide elevated feed rates of mercury, SVM, LVM, and chlorine to establish OPLs. A summary of the expected operating conditions for the CPT is provided in Table 6-1.

**TABLE 6-1
TEST CONDITION**

OPERATING PARAMETER	UNITS	TARGETS
Hazardous waste feed rate	tph	10
Mercury feed rate	lb/hr	5.0
Chlorine feed rate	lb/hr	80
Semivolatile metals feed rate ¹	lb/hr	70
Low volatile metals feed rate ¹	lb/hr	100
Rotary drum temperature	°F	500
Thermal oxidizer unit temperature	°F	1,400
Flue gas flow rate	acfm	4,000
Venturi scrubber pressure drop	in. w.c.	35
Packed bed scrubber liquid to gas ratio	gal/Macf	10
Packed bed scrubber liquid flow rate	gpm	40
Packed bed scrubber liquid pH	---	5.0

¹ The OPL for this parameter will be established from this condition using feed rate extrapolation.

6.2 PRINCIPAL ORGANIC HAZARDOUS CONSTITUENT

POHCs must be specified that are representative of the most difficult to destroy organic compounds in the hazardous waste feedstreams. The POHC must be chosen based on the degree of difficulty of destruction of the organic constituents in the waste. USEPA's primary ranking hierarchy was used as criteria in the selection of the POHC to ensure that the POHC chosen represents the widest range of compounds expected to be present in the waste feeds.

The POHC selection approach is based on the Thermal Stability Index (TSI) developed by Dellinger *et. al.*, at the University of Dayton Research Laboratory. This approach has been included in the USEPA's handbook *Guidance on Setting Permit Conditions and Reporting Trial Burn Results*. This ranking of compounds is based on their thermal stability, with the most stable being considered the most difficult to burn. The compounds are divided into seven classes. Compounds in Class 1 are considered the most difficult to destroy.

In addition to the TSI ranking, POHC selection is influenced by other criteria as follows:

- Physical state: The POHC must be limited to those constituents that are liquids at ambient temperatures and pressures to facilitate POHC handling and quantification;
- Stability: The compound selected as POHC must be sufficiently stable and have a boiling point suitable for conventional stack sampling techniques;
- Representative: The compound selected as a POHC must be representative of the types of constituents that the systems will typically handle; and

- Availability and cost: The compound selected as a POHC must be sufficiently available so that it can be purchased or formulated at a reasonable cost.

CWM would like the ability to process any hazardous constituent that could potentially be in a waste stream. Therefore, a TSI Class 1 POHC will be used for the CPT. USEPA guidance indicates that demonstration of DRE for a compound listed in Class 1 of the TSI is a sufficient demonstration for the most difficult to destroy compounds. Chlorobenzene has been chosen as the POHC for the CPT. This POHC is ranked 19th in Class 1 of the TSI. Chlorobenzene is suitable for current stack sampling methods. SW-846 Method 0030 is typically used to sample stack gas for chlorobenzene.

The amount of POHC detected in the stack gases will be used to determine the DRE for the system. DRE is determined for the POHC from the following equation:

$$DRE = \left[1 - \frac{W_{out}}{W_{in}} \right] \times 100$$

where:

W_{out} = Mass emission rate of the POHC present in exhaust emissions prior to release to the atmosphere; and

W_{in} = Mass feed rate of the same POHC in the waste feed.

Main comment. VP of chlorobenzene is low, and not representative either for transport of the POHC to the TO, or HCl generation. either needs to be injected at TO, not the TDU. Or, be a VOC that has VP at 60F? Certainly places need for VRU temp as OPL. For DRE, POHC s/b benzene or toluene

The POHC must be supplied to the unit in sufficient quantity to be detectable in the stack gas. Each stack sampling method has a minimum detection limit. Using the most conservative approach for the test, any compound which is found to be present in the stack gas at quantities below the method minimum detection limit or that is undetected in the stack gases is assumed to be present at the minimum detection limit. Therefore, it is very important to ensure that there is adequate quantity of POHC in the system feed to demonstrate the target 99.99 percent DRE.

The required POHC feed rate is determined by back-calculating from the stack sampling method detection limit and the target DRE (99.99 percent) using the following equation, which is derived from the DRE equation above:

$$W_{in} = W_{out} \times \left[\frac{100}{100 - DRE} \right]$$

Table 6-2 provides the POHC quantity that will be required for the CPT.

TABLE 6-2
PRINCIPAL ORGANIC HAZARDOUS CONSTITUENT QUANTITY

PARAMETER	UNITS	VALUE
Method detection limit	ng/dscf	70.8
Estimated stack flow rate	dscfm	1,300
Target destruction and removal efficiency	%	99.99
Emission rate required for detection	lb/hr	1.22E-05
Required POHC feed rate	lb/hr	0.12
Target POHC feed rate	lb/hr	10

The target POHC feed rate in Table 6-2 was chosen to provide an adequate safety factor above the calculated minimum required POHC feed rate and to provide a reasonable pumping rate for the spiking equipment.

6.3 METALS FEED RATE EXTRAPOLATION

CWM intends to utilize feed rate extrapolation to establish the SVM and LVM feed rate OPLs. The SVM and LVM feed rates and associated emission rates will be used to extrapolate to a higher allowable feed rate limits. The following equation will be used for the extrapolation:

$$FR_{LIMIT} = FR_{TB} \times \frac{ES}{EC_{TB}}$$

where:

- FR_{LIMIT} = Maximum allowable feed rate limit of SVM or LVM (lb/hr)
- FR_{TB} = Feed rate of SVM or LVM demonstrated during the CPT (lb/hr)
- ES = Emission standard for SVM or LVM (µg/dscm corrected to seven percent oxygen)
- EC_{TB} = Emission concentration of SVM or LVM demonstrated during the CPT (µg/dscm corrected to seven percent oxygen)

As discussed in *Final Technical Support Document for HWC MACT Standards, Volume IV: Compliance With the HWC MACT Standards*, linear upward extrapolation can be conservatively used to allow for higher metals feedrate limits while continuing to ensure that the facility is within the emissions standards. This is because metals system removal efficiencies tend to stay the same or increase as the feedrate increases. This applies to all metals types and volatility groupings. Therefore, an extrapolated metals feed rate will most likely produce an actual emission rate that is lower than the predicted emission rate. A linear extrapolation should ensure that the emission standards will not be exceeded at the higher feed rates.

← max extrapolation of 3x
or 80% of emission limit

The target feed rates were chosen to ensure that the CPT condition would provide a reasonable representation of the system removal efficiency for SVM and LVM and to minimize the effects of method detection limits on the extrapolation calculations. Table 6-3 presents the target SVM and LVM feed rates and the expected extrapolated SVM and LVM OPL.

TABLE 6-3
FEED RATE EXTRAPOLATION

METAL GROUP	UNITS	TARGET FEED RATE	EXPECTED EXTRAPOLATED LIMIT
Semivolatile metals	lb/hr	70	200
Low volatile metals	lb/hr	100	300

6.4 WASTE SPIKING

To achieve the desired operating conditions for the CPT, CWM will be required to spike the waste stream with known quantities of POHC, metals, and chlorine. The following spiking materials will be used during the CPT:

- Chlorobenzene will be spiked to provide adequate POHC feed rate for the DRE determination (the chlorobenzene will also contribute to the chlorine feed rate);
- A mercury oxide powder will be spiked to maximize the feed rate of mercury to establish the mercury feed rate OPL;
- Potassium chloride will be spiked to maximize the feed rate of chlorine to establish the chlorine feed rate OPL;
- A lead oxide powder will be spiked to increase the feed rate of SVM to allow for accurate extrapolation of the SVM feed rate OPL; and
- A chromium oxide powder will be spiked to increase the feed rate of LVM to allow for accurate extrapolation of the LVM feed rate OPL.

A spiking contractor will operate the spiking system for chlorobenzene during the stack testing. The chlorobenzene will be supplied by the spiking contractor. The solid spiking materials will be fed to the system by hand by CWM operators. These materials will be prepackaged prior to the CPT. Table 6-4 summarizes the waste spiking planned for the CPT.

**TABLE 6-4
WASTE SPIKING**

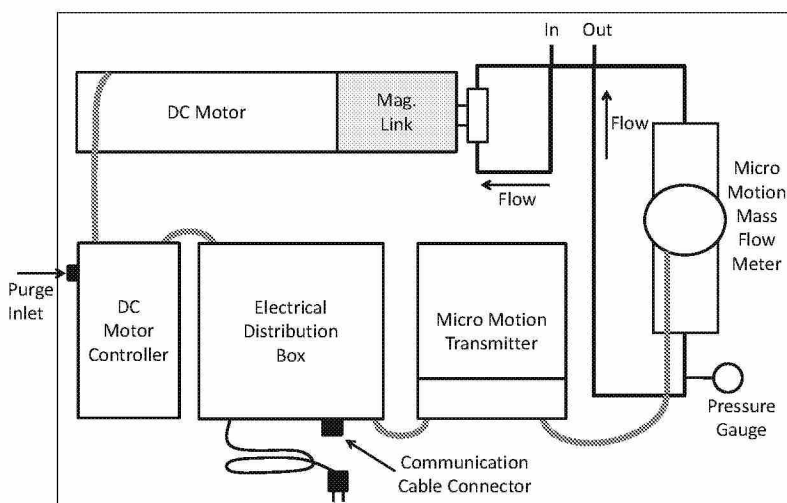
SPIKING MATERIAL	SPIKING ELEMENT	ELEMENTAL SPIKING RATE (LB/HR)	EXPECTED ELEMENTAL CONCENTRATION (%WT)	TOTAL SPIKING RATE (LB/HR)
Chlorobenzene	POHC	10	100	10
	Chlorine	3.2	31.6	
Mercury oxide	Mercury	5	92.6	5.4
Potassium chloride	Chlorine	77	47.6	162
Lead oxide	SVM	70	92.8	75.4
Chromium oxide	LVM	100	68.4	146

The chlorobenzene will be pumped directly onto the hazardous waste feed conveyor, downstream of the feed rate measurement location. The spiking system will consist of the following major equipment:

- Metering pump;
- Mass flow meter; and
- Process control and data acquisition computer.

The spiking material is connected to the suction of the pump from the supply drum with flexible tubing. The pump transfers the fluid through the mass flow meter and flexible tubing to the waste feed conveyor. The mass flow meter sends a signal to the process controller that will adjust the pump speed according to the set point. The data acquisition software will record the data continuously, providing a complete record of spiking rates. A schematic of a spiking system is provided in Figure 6-1.

**FIGURE 6-1
SPIKING SYSTEM SCHEMATIC**



HgO not appropriate. Elemental Hg is what is in the OBHW. VP orders of magnitude higher. Spike should be Hg elemental.

Chlorine spike should be VOC. Not salt. Salt has no VP, and does not transport to TO. Not valid demo for HCl. Chlorinated VOCs should be selected for chlorine spike. Inorganic chlorine cannot be included in the OPL for "chlorine" in the feed

The metals and chlorine spiking materials will be prepackaged prior to the CPT and will be manually placed on the conveyor during the test runs. The following spiking procedures will be used:

- For mercury oxide, a 1.1-pound package will be fed every 12 minutes;
- For potassium chloride, a 5.4-pound package will be fed every two minutes;
- For lead oxide, a 2.5-pound package will be fed every two minutes; and
- For chromium oxide, a 4.9-pound package will be fed every two minutes.

6.5 TEST MATERIALS AND QUANTITIES

Table 6-5 summarizes the quantity of materials required to conduct the testing. Triplicate runs will be carried out for the test condition. Test runs will require approximately 3.5 hours. An additional one hour of run time will be required for each day of testing in order to establish the steady state conditions and begin waste spiking before the start of the test runs, and one hour will be required between consecutive test runs. Therefore, for the purpose of calculating test quantities, a total of 13.5 hours has been used. We have also added approximately 40 percent to each total to allow for unforeseen delays.

TABLE 6-5
TEST MATERIAL QUANTITIES

MATERIAL	UNITS	QUANTITY
Waste	tons	200
Chlorobenzene	pounds	200
Mercury oxide	pounds	100
Potassium chloride	pounds	3,100
Lead oxide	pounds	2,800
Chromium oxide	pounds	1,400

6.6 TEST SCHEDULE

The sampling effort is estimated to require three days to complete. During this period, sampling equipment and instruments will be prepared and calibrated, supplies will be brought onsite, and sampling locations will be prepared. Although the onsite activities will dictate the actual timing, a preliminary schedule is presented in Table 6-6.

CWM has allowed one hour of run time in order to establish the steady-state conditions before the start of the test runs. Steady-state is defined as a condition when the TOU temperature and CO emissions remain stable with minimal fluctuation. If there is significant fluctuation at the end of the hour, the test will not begin until steady-state conditions are achieved. The waste spiking systems will be started at the beginning of the steady-state period. The waste spiking will be operated for at least one hour prior to performing any stack sampling.

**TABLE 6-6
TRIAL BURN SCHEDULE**

DAY	START	STOP	ACTIVITY
1	---	---	Set-up of sampling equipment
2	07:30	08:00	Pre-test meeting
	08:00	09:00	Cyclonic flow check and preliminary velocity check, setup of sampling equipment for Run 1
	09:00	12:30	Run 1
	12:30	13:30	Setup of sampling equipment for Run 2
	13:30	17:00	Run 2
3	08:00	09:00	Setup of sampling equipment for Run 3
	09:00	12:30	Run 3
	12:30	---	Break down sampling equipment

7.0 SAMPLING AND ANALYSIS

Sampling and analysis performed during the test conditions described in Section 6 will demonstrate the performance of the TDU with respect to the performance standards of Condition V.G.10 of the permit. The test condition will consist of three replicate test runs. For each run, samples will be collected using procedures described in the QAPP found in Appendix A. Since most of the proposed methods are standard reference methods, only brief descriptions are presented. Sample holding times will be consistent with the analytical requirements for the methods used.

7.1 WASTE SAMPLING AND ANALYSIS

Waste samples will be collected during each run of the CPT. The waste sampling location will be clearly labeled during the CPT. Table 7-1 summarizes the waste sampling and analysis procedures.

TABLE 7-1
WASTE SAMPLING AND ANALYSIS

SAMPLING METHOD	SAMPLING AMOUNT/ FREQUENCY	ANALYTICAL PARAMETER	ANALYTICAL METHOD ^{1,2}
Scoop sampling	Approximately 250 mL at 30-minute intervals	Mercury	SW-846 Method 7470A or 7471A
		Arsenic, beryllium, cadmium, chromium, and lead	SW-846 Method 6010B
		Chlorine	SW-846 Methods 5050 and 9056
		Chlorobenzene	SW-846 Method 8260B

¹ SW-846 refers to *Test Methods for Evaluating Solid Waste, Third Edition*.

² All methods will be performed in accordance with the laboratory's Louisiana Environmental Laboratory Accreditation Program (LELAP) approved standard operating procedures (SOPs).

The waste samples will be composited for each run into a one-gallon jar. At the conclusion of each run, the jar will be thoroughly mixed, and the sample will be divided into three 500-milliliter (mL) amber glass jars. The samples will be isolated from sources of contamination during the sampling and compositing efforts. One sample will be sent to the laboratory for analysis, one sample will be sent to the laboratory as a backup, and one sample will be archived onsite. The waste samples will be analyzed for chlorine and metals contents to develop the required OPLs and for chlorobenzene content to determine the DRE.

7.2 NATURAL GAS SAMPLING AND ANALYSIS

The natural gas will not be sampled and analyzed during the CPT. Analysis of this feedstream is not required for the compliance demonstrations.